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Livestock and Fellow Creatures!

Animal Welfare, Sustainability and the Ethics
of Nutrition from a Protestant Perspective

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Evangelische Kirche
in Deutschland

Livestock and Fellow Creatures!

Animal Welfare, Sustainability
and the Ethics of Nutrition
from a Protestant Perspective

A Discussion Paper authored by the Advisory Commission of
the EKD on Sustainable Development

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* Note of the translator AQ: Unless specified otherwise, all Bible quotations are taken from the NRSV.

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Preliminary Remarks

Questions of animal welfare and animal ethics are among some of the most discussed, controversial issues of our society. Images of animals suffering pain through intensive farming or killed en masse (for instance in the procedure of the so-called ‘chick-grinding machines’) give rise to strong emotions, making factual discussions rather more difficult. In all cases, it is quite clear that it is not only farmers and agricultural policies that are responsible for animal welfare; consumers of animal products also carry responsibility.

For the churches too, issues of animal welfare and animal ethics are highly relevant, since they address fundamental questions regarding human-animal relationships, which are, from a Christian ethical perspective, relationships between fellow creatures. Humans and animals are God’s creation; they both carry the same God-given breath of life (Ps 104 : 10–18). Humans and animals are both subject to God’s promises of blessing and protection (Gen 9 : 16). The biblical visions of peace for a new world explicitly include animals (Is 65 : 17 ff.). With good reason, this biblical perspective of the close bond between mankind and animal was emphatically underlined by both creation theology and the conciliar process of commitment to justice, peace and the integrity of creation in the 1980s.

Although animal welfare and animal ethics have such a great relevance within society, the churches have not expressed an opinion on these topics for a very long time. The last official statement by the EKD, entitled “Zur Verantwortung des Menschen für das Tier als Mitgeschöpf” (on the responsibility of mankind for animals as fellow creatures), was published in 1991. Additionally, in theological ethics and within the discussions of the ecumenical world of the last 20 years, issues of animal ethics have barely been addressed. Therefore, it is high time for the Protestant Church in Germany to fill this vacancy and provide further impetus for such a discussion within the churches and within society; in Germany as well as in the ecumenical world.

One idea which is also important for the Protestant churches, was included within Pope Francis’ encyclical “Laudato Si” in 2015, in which he denounced the disastrous anthropocentrism of present times, and expressly highlighted the intrinsic value of animals.

The study at hand is in a position to add even more, since it argues from a multitude of perspectives, including such an ethical and theological perspective. Behind the many topical examples of challenges within livestock husbandry lie complex correlations and connections, as well as the challenge of dealing with fundamental ethical questions which surround the agrarian economy, animal ethics, veterinary medicine, economic efficiency and food culture. Therefore, in 2018, the EKD Council commissioned the Advisory Commission on Sustainable Development not only to address important individual questions and regulatory areas, but also to illuminate the fundamental issues relating to human-animal relationships, as they are reflected, in particular, within the debate about new approaches to animal ethics.

The Advisory Commission carried out its work in 2018 and completed it in February 2019. In this study, its findings were presented in five sections:

- In the first chapter, fundamental biblical-theological perspectives regarding human-animal relationships are developed;
- The second chapter describes the change affecting animal-human relationships within the context of the development of smallholders' domestic and subsistence farming, towards an industrialised and streamlined form of animal husbandry in modern agriculture and within the national context of Germany;
- In the third chapter, the correlations and effects of a globalised form of agriculture and meat production are examined at a global level;
- In the fourth chapter, the churches' contribution to responsible human-animal ethics is presented, scrutinising diverse fields of action and areas of ethics;
- The fifth chapter depicts an outlook on diverse places of learning for the development of new human-animal relationships within Church and society, focusing, in particular, on exemplary places of learning in Church and society.

The study concludes with a summary of key statements relating to agricultural livestock ethics as well as giving direction and guidance for political postulations within the German, European and global context.

The very thing that was important for the group of authors, whilst the study was in progress, is just as important when it comes to articulating the desired effects of this study: It is an expression of a profound, challenging and rewarding process of learning and discussion which considers the connectedness between animal ethics, the steps of agro-ecological reform to be taken and global issues pertaining to development

and sustainability. The process which has led to this study, as well as its intended effects, is characterised by four key words:

- This study includes *multiple perspectives*: The work undertaken to produce this text has demonstrated that this subject matter requires the careful interlinking of very diverse aspects and new insights from biology, veterinary medicine, agro-ecology and nutritional science, as well as development policy, sustainability and theology;
- The study is intended to *promote debate*: We are directly involved in a broadening debate about a cultural transformation process within our society towards increased sustainability and responsibility with regard to animal ethics and ecology. Though this study will not be able to conclusively answer a large number of the detailed questions that are posed, it will nevertheless define some of the uncomfortable and difficult questions and invite to the discussion table all those who are interested in joining an honest dialogue about the fundamental issues surrounding animal husbandry, consumption patterns, globalised meat production and nutritional styles. It is for this reason that during the preliminary stages, the Advisory Commission had already discussed the fundamental ideas of this study with the German Farmers' Association (Deutscher Bauernverband), the German Association of Rural Women (Deutscher Landfrauen-Verband) and the Rural Youth Organisation of Germany (Landjugend);
- The study is based upon a *multi-agency approach* in terms of the responsibility to implement improved standards regarding matters of animal ethics and ecology: The responsibility for human-animal ethics does not lie with a single group (such as farmers), but with many actors in diverse fields of action;
- And finally, the study aims to enable and intensify a *learning process*: Diverse places of learning for the development of a new human-animal ethics are identified; learning that can be extended at a national and global level, as well as furthered by the Church and society.

According to the Advisory Commission on Sustainable Development, it is now time to apply a comprehensive, civilisatory re-learning process to the relationship between mankind and animals within the context of our modern civilisation; one which is no less important than the process of decarbonising our global economy. It will require multi-faceted participation, encouragement and penetrating dialogue in all areas of the Church and society. At the same time, this process is spurred on by the promise that it is never too late to reflect upon that which God intended, in his mercy to-

wards this creation, for this world; for people as much as animals: “Let everything that breathes praise the Lord!” (Ps 150 : 6).

In May 2019, the Council of the EKD unanimously approved the study at hand with appreciation and thanks. I thank the members of the Commission on Sustainable Development for producing this professional and profound text, which also provides ethical direction and guidance, and wish for there to be a response which is both varied and strong.

Hanover, September 2019

A handwritten signature in black ink, reading "Heinrich Bedford-Strohm". The signature is written in a cursive, flowing style.

Bishop Dr Heinrich Bedford-Strohm

Chair of the EKD-Council

1. Regarding the Relationship between Mankind and Animals – Biblical-Theological Perspectives

1.1 “Humans have no advantage over the animals” (Eccl 3,19) – Finding Traces of an Ethics of Respect for our Fellow Creatures in Biblical Tradition

*Let everything that breathes
praise the Lord (Ps 150:6)*

The public debate about the foundation of livestock ethics has quite recently been taken up by a broad cross-section of society in Germany.¹ With regard to the churches, this surge of interest is connected to reflections upon the protection of animals and the recent philosophical-ethical approaches² concerning the human-animal relationship within Protestantism. Time and time again, fairness, expertise and theological accuracy have been called for with regard to the debate about livestock ethics and the dialogue with agricultural associations.³ It was only in the first half of the 19th century that the first beginnings of a debate regarding the protection of animals, which emerged from a Christian motivation, were discerned in Württemberg Pietism.⁴ However, it was only with the 20th century upsurge in creation theology and creation ethics, within the context of the environmental movement and the conciliar process of commitment to justice, peace and the integrity of creation⁵, that traditional images of the “Dominium Terrae”, in which, following the traditions of Gen 1:28 and Ps 8:1–10, human beings

1 Cf. Further on the public debate: for instance, the article “Zur Ethik des Schinkenbrotens”: <http://www.zeit.de/2014/21/tierrechte-nutztiere-fleisch-essen>; or otherwise: Christian Dürnberger (ed.): Das Nutztier als Mitgeschöpf. Herausforderung für eine Ethik der Mensch-Tier-Beziehung, 2015; <http://www.ttn-institut.de/sites/www.ttn-institut.de/files/TTN%20Essay%20Preis%202015.pdf>. All hyperlinks in the text were last checked for validity in May 2019.

2 Cf. The pioneering approaches of the precursors of the animal rights movement, who were able to refer to the early studies of Peter Singer, Animal Liberation: A New Ethics for Our Treatment of Animals, 1975. In his reflections, he did not start out from the animals' capacity to think, but rather to suffer; *ibid.*, Praktische Ethik, 2nd ed., 1994.

3 Cf. Evangelischer Dienst auf dem Lande (EDL), Katholische Landvolkbewegung (KLB), Deutscher Landfrauenverband (dlv) and Deutscher Bauernverband (DBV): Gemeinsame Erklärung zum Erntedank 2017; <http://www.bauernverband.de/erntedank-2017>.

4 Cf. Martin H. Jung (ed.): Wider die Tierquälerei: Frühe Aufrufe zum Tierschutz aus dem württembergischen Pietismus, 2002.

5 Cf. For example, the early ecumenical declaration which was adopted in Stuttgart in 1988: “Gottes Gaben – Unsere Aufgabe”, which deduced, from the perspective of the theology and ethics of reason, a Christian commitment to the protection of species and animals, as seen in paragraph 4.35: Deutsche Bischofskonferenz (ed.): Gottes Gaben – Unsere Aufgabe. Die Erklärung von Stuttgart, Bonn 1988.

are considered to be the “crown of creation”⁶, and animals, merely subjects that need to be dominated, were critically examined and integrated into a further biblical context, about which there is, as yet, no fully developed animal ethics in doctrinal form, but rather, some traces and the beginnings of an ethics of respect for animals as fellow creatures.⁷ In the philosophical currents of our modern day, the relationship between mankind and animals has long been influenced by the idea that animals are senseless objects, meant only for exploitation by people. It was, in particular, Immanuel Kant who exclusively attributed an intrinsic purpose to humans; whilst, according to him, non-human beings were only valuable to the extent that they could be useful to humans. However, according to Kant, mankind also has the obligation to ‘handle animals in a humane way’ - albeit not for the animals’ sake, but merely for reasons of his own morality.⁸ The more recent philosophical discussion has radically challenged such objectivising images of animals – first and foremost, due to the reception of more recent academic insights into animals’ capacity to suffer and think.⁹

The more recent, philosophical and biological approaches have long overcome an objectifying-mechanistic view of animals, according to which the latter are stimulus-response machines incapable of feeling pain and whose internal life is irrelevant.¹⁰ In a remarkable way, we are now re-approaching old, biblical epistemological traditions: In the oldest biblical tradition, animals are doubtlessly our fellow creatures, as stressed in today’s Protestant¹¹, as well as Catholic¹², theology. According to the

6 On the problematic nature of this commonly used term, which cannot be found in the Bible itself, cf.: Barbara Schmitz: Der Mensch als “Krone der Schöpfung”. Anthropologische Konzepte im Spannungsfeld von alttestamentlicher Theologie und moderner Rezeption, in: *Kirche und Israel* 27 (2012), p. 18–32.

7 For an overview of the more recent debate within the EKD: Stefan Schleißing, Herwig Grimm: Tierethik als Thema der Theologie und des kirchlichen Handelns, in: Karl-Heinz Fix (ed.): *Dokumente zum Kirchlichen Zeitgeschehen, Gütersloh* 2012, p. 45–86; cf. also the magazine on animal ethics, which was only established in this century – *Zeitschrift zur Mensch-Tier-Beziehung*: http://www.tierethik.net/resources/Tierethik_20111.pdf.

8 Cf. Immanuel Kant: *Metaphysik der Sitten, Tugendlehre*, VI, AA § 17, p. 443; <https://korpora.zim.uni-duisburg-essen.de/kant/aa06/443.html>; Michael Rosenberger summarises Kant’s teachings as follows: “All human beings have their own purpose and are to be respected for their own sake. All non-human beings, however merely have a price, i. e. a use value, inasmuch as they seem useful and valuable to humankind.”; cf. for the controversial interpretation of Kant’s teachings, pointing out that there is no mention of the animals’ intrinsic value in the philosophical discussion: Ludwig Trepl: *Kant und der Tierschutz. Die Unterteilung der Naturethiker in Anthropozentriker und Biozentriker ist irreführend*, 2012; <http://www.moraltheologie.uni-wuppertal.de/wp-content/uploads/2014/12/Ludwig-Trepl-%E2%80%99Kant-und-der-Tierschutz.pdf>.

9 Cf. Richard David Precht: *Tiere denken: Vom Recht der Tiere und den Grenzen des Menschen*, München 2018; cf. also: Interview Richard David Precht über Fleisch: *Diese Tiere sind wie Menschen*; <http://www.taz.de/15361916/>; similar hypotheses in: Richard David Precht: *Noahs Erbe. Vom Recht der Tiere und den Grenzen des Menschen*, Hamburg 2000.

10 Cf. On several aspects of the more recently developed science-oriented revolution regarding the image of animals, especially: Norbert Sachser: *Der Mensch im Tier. Warum Tiere uns im Denken, Fühlen und Verhalten oft so ähnlich sind*, 2018. On the entire debate, cf. also: *Themenheft Mensch und Tier*, in: *Aus Politik und Zeitgeschichte*, 62nd year, 8–9/2012, February 2012.

11 Cf. Rainer Hagencord: *Gott und die Tiere. Ein Perspektivenwechsel*, Regensburg 2018.

12 Cf. Simone Horstmann et al: *Alles, was atmet. Eine Theologie der Tiere*, Regensburg 2018; also: Michael Rosenberger: *Der Traum vom Frieden zwischen Mensch und Tier: Eine christliche Tierethik*, München 2015.

narrative of the first creation account, animals were created on the 6th day of creation (Gen 1:24–27), on the same day as mankind, with only the exception of aquatic animals and birds, which were created just one creation-day *before* humans (Gen 1:20–23). Therefore, animals are closest to people in terms of rank. In the Bible, it is possible to recognise the beginnings of a biblical zoology¹³ that stretches back to the oldest sources of the creation accounts in the Old Testament, which provides a structure for the animal world, even if it does not directly correlate to a complete zoological classification or hierarchy of all animals. It is natural that animals would belong to the living environment of the Bible; about 130 species are mentioned in biblical accounts.¹⁴ Of course, humans occupy a special position in and towards nature – only mankind is said to be made in the image of God, *Imago Dei* (Gen 1:26); however, like mankind, animals have also been given God’s breath of life. In the wisdom literature of the Old Testament, complementary traditions can be found which closely associate animals with mankind due to the fact that they were created by God and depend upon his life-giving spirit: “For the fate of humans and the fate of animals is the same; as one dies, so dies the other. They all have the same breath, and humans have no advantage over the animals; for all is vanity.” (Eccl 3:19). On the other hand, animals are neither idealised nor romanticised in biblical tradition: The Bible refers to stinging mosquitos, plagues of locusts, and, famously, the snake, that maliciously leads people into temptation (Gen 3:1 ff.). In addition, following the wisdom of the Old Testament, there is no strict distinction between wild animals, farm animals and pets. The attitude of the individual towards an animal should however, be characterised by fairness and compassion: “The righteous know the needs of their animals, but the mercy of the wicked is cruel” (Prov 12:10). The Psalms of the Old Testament are full of praise that: God has wonderfully created all the animals and birds of the field, that he has placed food and all the necessities of life within reach, even for the animals, sustaining them with the gifts of creation; and that God’s breath of life also dwells within them (Ps 104:10–18 and 27–30). Therefore, it is appropriate to speak of a specific ‘dignity of animals’ as mankind’s fellow creatures, even if a detailed doctrine of “animal dignity” cannot be found within the Bible and the characteristic of being made in the ‘image of God’ remains reserved for mankind.¹⁵

13 Cf. Ideas from the work undertaken at the Institute of Theological Zoology: <http://www.theologische-zoologie.de/>; cf. also: Rainer Hagencord: *Theologische Zoologie und Laudato Si*, in: Michael Biehl, Bernd Kappes, Bärbel Wartenberg-Potter (ed): *Grüne Reformation und Ökologische Theologie*, Hamburg 2017, p. 109–123.

14 Cf. An overview of “animal” within the biblical tradition: <https://www.bibelwissenschaft.de/wiblex/das-bibellexikon/lexikon/sachwort/anzeigen/details/tier/ch/4495116a5b09da5d734c45d5062338df/>.

15 An actionable term such as the “dignity of animals”, as laid down in the Swiss Animal Welfare Act in Art. 1, does not, as yet, exist within the biblical tradition, but its emergence would be very much akin to the meaning behind biblical creation theology.

A review of our modern relationship with animals, influenced by the industrialisation, is therefore not only necessary within the context of the debate surrounding livestock ethics in the field of agriculture, but it is also imperative within the context of the broader global ecological crisis. This urgent situation is associated with the “disappearance of the animals” – which is a term used to describe a frequently unrecognised, dramatic reality: “The acceleration of the loss of species is so substantial that between 10 and 38% of all existing species at the beginning of the 21st century will have disappeared by the year 2020. It is clear that we are currently dealing with the sixth greatest disaster of its kind and, at the same time, it is the first to be caused by humankind.”¹⁶ It is, in particular, the biblical testimony of the Old Testament which reflects an awareness of the constant co-existence of humans and animals from the context of an agrarian society. Following on from many more testimonies, the Old Testament considers the “fact that, for about three billion years, life on this planet developed without humankind and that there is no place on earth which had not been accessed by animals before we came.”¹⁷ Therefore, it is not only human beings with whom God, the creator, is well pleased, but the entire created world which consists of people, plants and animals (in Gen 1:24–25, following the creation of the animal world, we read: “And God saw that it was good”).

Between the complete objectification of animals, as propagated in the modern era, for example by René Descartes¹⁸, and a reminder that they are our fellow creatures, as highlighted, for example, by Francis of Assisi¹⁹, there has been a great divide for many years.

In a discussion paper of 1991, the churches of the EKD summarised the biblical-theological perspectives regarding our responsibility for animals as our fellow creatures (“Zur Verantwortung des Menschen für das Tier als Mitgeschöpf”)²⁰. This has been

16 Rainer Hagencord: *Theologische Zoologie und Laudato Si*, in: Michael Biehler, Bernd Kappes, Bärbel Wartenberg-Potter (ed): *Grüne Reformation und Ökologische Theologie*, Hamburg 2017, p. 110.

17 Cf. *ibid.*, p. 111.

18 René Descartes coined the phrase which describes animals as mere machines: “Animals are mere machines. Their cries of pain are no more than the squeak of an unlubricated wheel”, in: <http://www.tierrechte-tv.de/Themen/Philosophie/Descartes/descartes.html>.

19 The statement that all living creatures feel as we do, is attributed to Francis of Assisi: “All earth creatures feel as we do, all creatures strive for happiness as we do. All earth creatures love, suffer and die as we do, and so they are our equals in the work of the Almighty Creator – our brothers”, in: <https://www.aphorismen.de/zitat/3442>; cf. Anton Rotzetter: *Die Freigelassenen. Franz von Assisi und die Tiere*, 2011.

20 Evangelische Kirche in Deutschland: *Zur Verantwortung des Menschen für das Tier als Mitgeschöpf. Ein Diskussionsbeitrag des Wissenschaftlichen Beirats des Beauftragten für Umweltfragen des Rates der EKD, 1991², EKD-Texts 41*; https://www.ekd.de/tier_1991_tier2.html.

succeeded by several other outstanding, pioneering studies on animal ethics from several regional churches.²¹ For the first time ever, important Christian perspectives concerning the protection of animals are being stated and officially pronounced. The 1991 study states:

“Human beings and animals belong together since they are both God’s creation: Neither of them is able to provide chances, opportunities, a living environment nor sustenance for themselves. They owe their lives to God, their creator and provider. This binds them together in their dependence (Ps 104:27–30) and, essentially, does not permit humankind to distance themselves from, and arrogantly place themselves above, the animals. Fellow creatures, human beings and animals alike, are merely a part of the great overall structure of creation in which the miracle of life dwells and will continue to dwell; persisting even without the assistance of humankind.”²²

Even if the development of livestock ethics, within the context of the modern challenges of an industrialised agriculture, had not been undertaken at the time of the EKD-Study, the hypothesis that an animal cannot simply be reduced to its use value for mankind would still have been worthy of investigation and is hereby presented as an initial, definitive insight:

“Additionally, such a perspective leads to the insight that neither living beings nor the uninhabited parts of the world are entirely defined by their usefulness for humankind. Even before one can calculate their usefulness for human beings, it is important to consider that animals have a use value in relation to other living beings, as well as regarding their own general life processes. This already necessitates that individuals consider their interaction with nature and thus also with animals; they should not focus solely on their own interests, but need to keep in mind the possible effects that they might have upon the living conditions of other

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- 21 Particularly from the region of the North-Elbian Protestant Lutheran Church: Zum verantwortlichen Umgang mit Tieren. Auf dem Weg zu einem Ethos der Mitgeschöpflichkeit. Stellungnahme der Kirchenleitung der Nordelbischen Evangelisch-Lutherischen Kirche, 2005; <http://www.kda-nordelbien.de/index.php/tierethik/206-ethos-der-mitgeschoefflichkeit.html>, followed by: Zwischen Landwirtschaft und Industrie. Diskussionshilfe zur Tierhaltung am Beispiel der Situation in Mecklenburg-Vorpommern. Evangelisch-Lutherische Kirche in Norddeutschland, 2017; https://www.kda-nordkirche.de/ff/e/Beitraege/Landwirtschaft/Zwischen-Landwirtschaft-und-Industrie_2017.pdf; cf. also: Evangelisch-Lutherische Kirche in Oldenburg: Mitgeschöpflichkeit in der Nutztierethik. Ethische Impulse. 2015; https://www.kirche-oldenburg.de/fileadmin/Redakteure/PDF/PDFs_2015/ELKiO-Synode-11-2015-Nutztierhaltung.pdf; further: Stellungnahme an die Synode der Evangelisch-Lutherischen Kirche in Oldenburg zu diesem Impulspapier von 2017.
- 22 Evangelische Kirche in Deutschland: Zur Verantwortung des Menschen für das Tier als Mitgeschöpf. Ein Diskussionsbeitrag des Wissenschaftlichen Beirats des Beauftragten für Umweltfragen des Rates der EKD, 1991², Paragr. 5 f.; https://www.ekd.de/tier_1991_tier2.html.

*living creatures. First and foremost however, is the notion that any fellow creature has an intrinsic meaning and value, irrespective of their use value.*²³

This fundamental conviction entails the imposition of clear boundaries regarding the use of animals by humans; restrictions which will always be linked to foundational, ethically-responsible conditions such as proportionality and the dignity of animals²⁴:

*“The use of animals is only permissible as long as it is neither associated with pain nor with suffering in order to increase their productive capacity for the benefit of humankind, and as long as the dignity of animals is preserved.”*²⁵

Following more than a century of public debate, the Federal Government of Germany entered animal protection into Basic Law (German constitution) as a legal obligation in 2002, thereby elevating it to constitutional status – or rather, animal protection was established as a protection mandate of the state (in Article 20a of the Basic Law; the Animal Protection Act was constituted earlier²⁶). There is a core provision which applies here and which causes controversial discussion, time and time again, on account of a relativising stipulation that is open to interpretation: “No person may, without good cause, inflict pain, suffering, injury or lasting harm on any animal”. It is the wording “without good cause” which is under discussion, since it is possible for animals to suffer unnecessarily and therefore preventibly – and of course, this not only applies to livestock, but also to zoo animals or pets. The national objective of animal welfare places an obligation upon governmental agencies to redraft the legislation of 1986 regarding animal protection, since it requires the implementation of the respective scientifically-backed level of understanding regarding the capacity for suffering and sentience of animals, which is especially great in more highly-developed animals, such as farm animals. From an ethical perspective, consideration for animal welfare is obligatory for all citizens and non-negotiable. This applies as much to anyone working within the field of animal husbandry, as it does to those working with other animals. There is, as yet, no statutory rule to provide the detail of the provisions following

23 Ibid., Paragr. 7; https://www.ekd.de/tier_1991_tier2.html.

24 Cf. On the debate concerning the dignity of animals: Kurt Remele: Die Würde des Tieres ist unantastbar. Eine neue christliche Tierethik, Kevelaer 2016.

25 Evangelische Kirche in Deutschland: Zur Verantwortung des Menschen für das Tier als Mitgeschöpf. Ein Diskussionsbeitrag des Wissenschaftlichen Beirats des Beauftragten für Umweltfragen des Rates der EKD, 1991², Paragr. 8; https://www.ekd.de/tier_1991_tier2.html.

26 The first German law for the protection of animals (Reichstierschutzgesetz) was passed on 24th November 1933. Cf. [https://de.wikipedia.org/wiki/Tierschutzgesetz_\(Deutschland\)](https://de.wikipedia.org/wiki/Tierschutzgesetz_(Deutschland)).

the general definition of livestock ethics; neither in Germany, nor the EU, and much less so at a global level, even though it has been called for on various occasions.²⁷

Since the theological category of animals being our “fellow creatures” has been re-discovered, the question as to whether – and how to – reconcile this theological category with the use of the economically-dominant definition of “livestock” (or rather, whether and how the discrepancy between these two different stipulations can be resolved and outworked in practice) has been the subject of a relatively recent debate, which – in spite of its enormous relevance for ecological, developmental and agricultural perspectives – has, so far, been pursued exclusively in Western European countries.²⁸ The Protestant churches’ engagement in this debate, which gave rise to this discussion paper, has been enriched and challenged by the changing perspectives in Roman-Catholic creation theology and environmental ethics, as portrayed in the encyclical “Laudato Si”. In this encyclical, Pope Francis emphatically called for a renunciation of an unrestricted anthropocentrism and expressly underlined the intrinsic value of animals, as well as the protection of their dignity:

“We are not God. ... We must forcefully reject the notion that our being created in God’s image and given dominion over the earth justifies absolute domination over other creatures. ... In our time, the Church does not simply state that other creatures are completely subordinated to the good of human beings, as if they have no worth in themselves and can be treated as we wish. ... Moreover, when our hearts are authentically open to universal communion, this sense of fraternity excludes nothing and no one. It follows that our indifference or cruelty towards fellow creatures of this world sooner or later affects the treatment we mete out to other human beings.”²⁹

27 Cf. The advisory report of the agricultural policy advisory council of the German Federal Ministry for Food, Agriculture and Consumer Protection “Wege zu einer gesellschaftlich akzeptierten Nutztierhaltung”, Berlin 2015, in: http://www.bmel.de/SharedDocs/Downloads/Ministerium/Beiraete/Agrarpolitik/GutachtenNutztierhaltung.pdf?__blob=publicationFile; further such research from a Swiss perspective, is also to be found: <http://peter-singer-preis.de/nutztierethische-fragestellungen-gesamts-aufgabenbereich-fuer-ethikraete/>.

28 Cf. Epd news of 17.5.2002: Tierschutz ins Grundgesetz aufgenommen; http://archiv.ekd.de/aktuell_presse/news_2002_05_17_1_tierschutz_gg.html.

29 Pope Francis: Encyclical Laudato Si. On Care for Our Common Home, Paragraphs 67, 69, 92; http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html; cf. *ibid.* also: “We have only one heart, and the same wretchedness which leads us to mistreat an animal will not be long in showing itself in our relationships with other people. Every act of cruelty towards any creature is “contrary to human dignity” (Paragr. 92). Against the background of the “tyrannical anthropocentrism” (Paragr. 68) that dominated church history for centuries, Pope Francis sets the conviction that God’s life-giving spirit dwells in all his creatures (Paragr. 88), that the ultimate purpose of other creatures is not to be found in their relationship with humans, but with God, “in that transcendent fullness where the risen Christ embraces and illumines all things” (Paragr. 83).

German: https://www.dbk.de/fileadmin/redaktion/diverse_downloads/presse_2015/2015-06-18-Enzyklika-Laudato-si-DE.pdf.

1.2 “... but the seventh day is a sabbath to the Lord your God. On it you shall not do any work, neither you, nor ... your animals” (Ex 20: 10; NIV) – Animals’ Share in God’s Salvific Covenant Ordinances within the Context of Pre-Industrial Agriculture

The biblical tradition does not offer a ready-made livestock ethics, especially since today’s challenges, within the context of industrialised meat production and intensive livestock farming, lie beyond the horizon of ancient agricultural conditions.³⁰ At the same time however, it is remarkable that, even in the Old Testament tradition, animals are not excluded from the legal order of the covenant with God: In principle, animals share in the sabbath order, which is to limit the exploitation and utilisation of labour and time (Ex 20: 8–11 f.), as well as to release praise to the creator that has meaning but no purpose: “But the seventh day is a sabbath to the LORD your God; you shall not do any work—you, your son or your daughter, your male or female slave, *your livestock*, or the alien resident in your towns.” (Ex 20: 10) – The sabbath order, which is to bring rest and relaxation, recovery and a welcome interruption to routine, is also designed for the animals. Animals share in the Noachian covenant, which entails sustaining and preserving the entire creation from disastrous forces and global flood, as well as experiencing the blessing of the continuous rhythm of seedtime and harvest. The Noachian covenant applies to “every living creature of all flesh that is on the earth” (Gen 9: 16). Since animals are living beings, they share in God’s life-giving spirit (Ps 104: 30). Later strata of the Old Testament tradition even presume that, in encountering animals, one may learn more about the goodness of God in creation, as well as about his work in every living being:

“But ask the animals, and they will teach you; the birds of the air, and they will tell you; ask the plants of the earth, and they will teach you; and the fish of the sea will declare to you. Who among all these does not know that the hand of the Lord has done this? In his hand is the life of every living thing and the breath of every human being” (Job 12: 7–10).

30 Although the Bible recognises large animal stocks, which were certainly not considered to be objectionable in and of themselves, (e. g. it says at the end of the Book of Job, that Job was blessed with fourteen thousand sheep, six thousand camels, a thousand yoke of oxen, and a thousand donkeys (Job 42: 12)), the technical-industrialised intensive farming, such as we have today, was certainly not found during biblical times.

On the other hand, the bodies of law in the Old Testament do not contain a specific “charter of animal rights”. The biblical collection of laws does not seem to be aware of any particular “rights of the animal” over and against human beings. Even the oft-quoted reference “You shall not muzzle an ox while it is treading out the grain” (Dtn 25:4) is insufficient proof for the existence of an animal rights ethics within the biblical tradition; simply because it is not a focus of the ancient, oriental societies, but rather became a discussion point during modern times.³¹ In addition, the biblical tradition knows that, in our “fallen world”, the relationship between mankind and animals, as well as the relationship between different kinds of animals, is marked by violence (“the earth is filled with violence” (Gen 6:13)). The old Jewish tradition is acquainted with a tradition of animal slaughter, which, however, was cultically regulated, monitored and controlled according to the ancient priestly tradition of animal sacrifice (the entire first chapter of Lev. 1 is dedicated to this issue): God is the Lord of all life; even gifts of animal life are to be sacrificed to him (Lev 1:17). At the same time, a closer look at the Old Testament tradition reveals a substantial concern for the reduction of violence and suffering, even within the relationship between humankind and animals in the faith of the Bible. A decrease in the level of wickedness and acts of violence is an element of many prophetic promises (Is 60:18). The question as to whether or not the power relations between humankind and animals (that is, those forms of relationships with livestock that are marked by exploitation, pain, suffering and a type of husbandry which is inappropriate for the species), should be limited, checked or even abolished in principle, is not addressed in the biblical tradition. Today, it remains controversial within the history of the Church³²; where diverse levels and traditions of ethical radicalism develop. In the EKD’s discussion paper of 1991, the common Christian consensus is expressed as follows:

“The special position of the human being amongst his fellow creatures includes the task to recognise his own responsibility in an appropriate manner. It is solely the individual who can identify the consequences of his actions towards fellow human beings and fellow creatures, and draw conclusions from these; it is solely the individual therefore, who may be blamed for problems in creation. ... The relationships between animals themselves are marked by violence and can often seem alarming to the human observer given their cruelty and brutality. ... Still, this is no justification for the thoughtless, unrestricted utilitarianism or even exploitation of

31 Cf. I.a. The works of Andrew Linzey at the Oxford Centre for Animal Ethics, in: <http://www.oxfordanimaethics.com/>.

32 Cf. Hans-Eberhard Dietrich: Die Tiere als Mitgeschöpfe. Eine kritische Auseinandersetzung mit kirchlichen Verlautbarungen zum Verhältnis Mensch-Tier aus den Jahren 1980 bis 2003, Deutsches Pfarrerblatt 8/2013.

animals by humankind. The legitimisation to use the service and life of animals will have to remain bound by the commission to exercise dominion through loving care and a nurturing kind of preservation.”³³

1.3 “Every moving thing that lives shall be food for you” (Gen 9:3) – The Reasoning behind, and the Limitations regarding, the Consumption of Meat within the Dietary Laws of the Old Testament

Questions of nutrition, dietary laws and table fellowship are central themes across all biblical traditions. From the perspective of the Bible, animal ethics and nutritional ethics for humans are closely interlinked and cannot be separated. The central significance of nourishment is underlined by the first chapter of the Old Testament, where it is said that God gives humans **and** animals their respective food (Gen 1:29): “God said, ‘See, I have given you every plant yielding seed that is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food.’” Whilst here, in the first (historically later) priestly creation account and also in the second (historically earlier) account, plant products (Gen 2:16: “You may freely eat of every tree of the garden”) were provided for human beings (fruit, crops and grains, nuts and pulses), there is also a second biblical tradition stemming from the context of the Flood narrative **after** the Fall, according to which animals were commended to humankind for consumption (“Every moving thing that lives shall be food for you; and just as I gave you the green plants, I give you everything.” (Gen 9:3)). The Bible retains its delicate knowledge that meat consumption by human beings is part of the Noachian covenant between God and humankind after the Flood, but not part of the original goodness and peaceful order of creation. Meat consumption is, after all, an expression of the violent thoughts and actions that entered creation through the Fall and the first fratricide.

So may humankind kill animals in order to survive and feed themselves? This question is, by no means, as easy to answer as a large majority assumes. On the one hand, one may argue, from an evolutionary point of view (based on the knowledge pre-

33 Evangelische Kirche in Deutschland: Zur Verantwortung des Menschen für das Tier als Mitgeschöpf. Ein Diskussionsbeitrag des Wissenschaftlichen Beirats des Beauftragten für Umweltfragen des Rates der EKD, 1991², Paragr. 9–11; https://www.ekd.de/tier_1991_tier2.html.

served and passed on in the account of creation after the Fall) that humankind survived by domesticating animals and benefitting from their produce (eggs, milk), as well as killing these same animals and eating their flesh. Only 150 years ago, people in colder climates would have starved to death had they denied themselves meat, since plant products could not be sufficiently preserved. Humankind can and must reduce this element of violence in their relationships with animals, and attempt to survive with a minimum level of cruelty, but will not be able to evade the question in principle.³⁴ These forms of violence, in respect to the relationship between humankind and animals, should, in no way, be downplayed, made light of nor given too easily a religious justification: The killing of animals cannot be neutralised, in an ethical sense, by any routinisation, implementation en masse, confinement to places which are largely invisible to the public, or ensuring that it is tolerated by society. The repression of the fact that we have to slaughter animals if we wish to eat meat helps neither consumers nor producers. On the other hand, with its reminders of a vision of peace for the human-animal relationship, the biblical tradition places us in a position of continuous tension with respect to the omnipresence of this violent relationship. It therefore also lays the foundation for the opportunity to ask (within the respective historical and social conditions of the present): What is most likely to aid a reduction of violence within the relationship between humankind and animals (according to the vision of peace in relation to animal ethics, as presented in the prophetic tradition, cf. chapter 1.2.5), and which links between ethics and law, and between animal ethics and animal protection laws, will most serve the reduction of violence today?³⁵

The Bible does not provide a blanket answer to the ideological dispute between the vegetarianism and meat consumption of today³⁶; however, it does convey some important and unambiguous guidance towards a form of nutrition which is very economical in regards to its use of meat and/or vegetarian food. Clearly, neither a rash, sweeping hypothesis “Jesus was no vegetarian and that is why it does not matter what Christians eat today” (with reference to, for instance, the feeding of the 5000: Lk 9:12–17 or Dtn 12:15f.) nor the opposite, equally sweeping hypothesis “The Jewish-Christian tradition was altogether vegetarian” (with reference to Gen 1:29)

34 Michael Rosenberger: Mäßigung der Lust auf Fleisch, in *Zeitzeichen* 2014, in: Cf.: <https://zeitzeichen.net/geschichte-politik-gesellschaft/2014/christen-und-fleischkonsum/>.

35 Cf. Almuth Hirt, Christoph Maisack, Johanna Moritz: *Tierschutzgesetz: TierSchG, Kommentar*, 3rd edition, 2016.

36 Cf. Konrad Hilpert: Müßten wir alle Vegetarier werden? Fleischliche Nahrung und neuere Tierethik, in: *Religionsunterricht an höheren Schulen*, 1993, p. 297 ff.

are historically adequate and appropriate in terms of the complexity and diversity of the two-thousand-year-old biblical testimony regarding the understanding of nutrition and the human-animal relationship.

Certainly, an important and relevant tradition regarding Christian vegetarianism³⁷ can already be found in apostolic times. The Eastern-Orthodox and Oriental-Orthodox churches regularly abandon all meat consumption during periods of fasting, in order to suspend all that pertains to violence within our lives.³⁸ By creating a rhythm to the regular pattern of fasting and feasting, these ancient Christian traditions can help us to intensify and re-discover a spirituality of nutrition today; one which does not aim to “always” have “everything” at its disposal, but which proves itself to be a wholesome culture of self-restraint in order to feel and physically experience that which is currently helpful, and that which is not, with regard to nutrition.

Within the context of a Western culture which is oriented towards consumption and superabundance, the ascetic tradition of the ancient church seems all but forgotten. This tradition not only applied to individuals with a particular calling (such as the Desert Fathers), but was spread across Christendom: Already within Judaism, the triplet of “praying – fasting – giving of alms” was considered to be the most important identifier of a spiritual person. In the first centuries, all Christians fasted twice a week (on Wednesdays and on Fridays³⁹) as a matter of principle. Alongside these, the whole of Christendom knew about the forty days of fasting during Passiontide (Lent – the “fasting period”), but also the special, two days of fasting in preparation for Easter (Good Friday and Holy Saturday). Each fasting period indicated and instigated an interlinking of spirituality, an alternative diet, formation and diaconia (it “was an independent time of repentance and inner purification. Asceticism, prayer and the giving of alms were recommended during these times. They were also a time for extended sermons”).⁴⁰ The interlinking of spirituality, diaconia, formation and an alternative – or even vegetarian – diet were thereby the root and origin of the early, culturally-influential and educating power of Christianity in Antiquity.

37 Cf. Carl Anders Skriver: *Die Lebensweise Jesu und der ersten Christen*, Lübeck 1973.

38 Cf. Further to the broader context of the Abrahamic religions, see also: *Fasten in den abrahamischen Religionen*, Abrahamisches Forum Deutschland, Darmstadt 2013; <http://www.interkultureller-rat.de/wp-content/uploads/Fastenpapier-web4.pdf>.

39 Fasting on Wednesdays reminded Christians of the gathering of the Sanhedrin, into which Jesus – the traitor – was brought. Fasting on Fridays was associated with Jesus' crucifixion.

40 Cf. Anselm Grün: *Die Fastenpraxis der frühen Kirche und was daraus geworden ist. Heutige Möglichkeiten*, in: *Religionsunterricht an höheren Schulen*, Heft 5/93, p. 291–296.

With regard to the relations between humankind, animals and nutrition, the core of the biblical faith, firstly and most importantly, ascribes wonder and gratitude for the grace of God who gives food to all people in abundance (Ps 104:10–13). According to the Old Testament, faith is full of praise for the God who brought his people into a good land, a land of abundance, in which there is more than enough to eat: “*a land of wheat and barley, of vines, fig trees and pomegranates*” (Dtn 8:8). Of course, milk is a part of that diet (cf. Is 55:1; Prov 27:27; Sir 39:26), since it was highly esteemed in ancient Israel, which was “*a land flowing with milk and honey*” (Ex 3:8; Ex 13:5) and was drunk as goats’ milk (Ex 23:19; Prov 27:27) or as sheep’s and cow’s milk (Dtn 32:14). Far beyond its ability to alleviate hunger, food also contributes to human beings’ joy and happiness (Ps 104:15; Joel 2:21–24).

It is not only people for whom God provides food, but also animals (Ps 104:14–15; 21). It is precisely because food is an expression of the infinite goodness of the Creator that the way in which individuals deal with food, in every stratum of the Bible, is a spiritual, as well as an ethical, issue. The question regarding the kind of relationship that is expressed by the connection between mankind, animals and natural living environment, is more closely related to the question concerning the right way to conform to the will of the Creator, holiness in every-day-life (Lev 19:2), and, ultimately, to the first and second commandment (Ex 20:1–3). In the Jewish tradition, respect and love for the God of life requires that any matter relating to food and nourishment is embedded within a set of rules that ensure that God alone is given the glory and that Israel continues to be recognised as the people of God. Israel is to conform to its election as the covenant partner of the God who desires freedom and justice, thereby remaining visibly differentiated from other people groups, religious identities and political or cultic loyalties. Historically, the ritualised version of this requirement took the shape of Jewish dietary rules, the main element of which was the renunciation of all that was – in Antiquity – considered to be the core component of every living being: “Only, you shall not eat flesh with its life, that is, its blood” (Gen 9:4), and which is still adhered to today, forming part of the Jewish regulations for a kosher kitchen (or rather, it was further developed as a part of the Muslim determinations for a halal diet).⁴¹ The “blood-taboo is an expression of awe and deep respect for

⁴¹ It is impossible, at this point, to discuss the particular issue of Jewish kosher slaughter. From a historical point of view, this tradition of animal slaughter must be considered to be progress, since animals were meant to be slaughtered in a preferably pain-free and quick way, and this was to be embedded in a ritual and thereby supervised. Whether or not kosher slaughter, which forbids stunning, can be considered to be ethically responsible, according to today’s modern veterinary insights, is disputable. Cf. Box 11 “Kosher Slaughter”.

God, who gives life to animals and therefore possesses all discretionary power over their lives⁷⁴²; it is a sign of a religious tradition which aims to reduce the use of violence against the animal world, our fellow creatures. Included in the purity laws for the priesthood, the consumption of meat was subject to precise regulation (cf. the lists of clean and unclean animals; Lev 11 and Dtn 14), in which archaic, ceremonial, sanitary and possibly early medicinal wisdom from nomadic cultures is connected with the specifically religious tradition of respect for God as the creator of all living beings (abstaining from the consumption of pork was always attributed to reasons of health and hygiene).

From an historical perspective, one must assume that the great majority of the Jewish population in biblical times had a predominately plant-based diet; that is, they lived on the fruits of the field, since, amongst various reasons, the majority of the poor were unable to afford meat and only specific animals were allowed to be eaten (Dtn 14:4–6, amongst them oxen, goats, sheep; fish only gained a more important role in New Testament times). For most contemporaries in antiquity, meat consumption was a rarity, for example, it might be eaten as part of a sacrificial feast in favour of a deity. Today's extreme excess of meat consumption, both in terms of quantity and frequency, would have been entirely inconceivable throughout the entirety of biblical times. Until New Testament times, a paterfamilias did not slaughter a fattened calf every day, but only on that very special day when the prodigal son came home (Lk 15:23). The eating habits of the few affluent people at the king's court in ancient Israel contrast sharply with the predominant, meat-deficient lifestyle of the majority of the people of Israel (1 Kings 5:3: ten fat oxen and twenty cattle ...) and were criticised by the prophets: The "*revelry of the loungers shall pass away*" (cf. Amos 6:7b). Even if it is not possible to directly transfer the historical and ceremonial aspects of the Jewish dietary rules into today's context, this basic thought remains important: One should think about what one wishes to consume, since it affects our relationship with God, our fellow creatures and our neighbour. The definitive proposition of the biblical tradition is the statement that the eating habits of mankind are subject to the categorical command to significantly reduce the use of violence against creation and all living creatures, as well as to minimise injustice within all human relationships.

42 Evangelische Kirche in Deutschland: Zur Verantwortung des Menschen für das Tier als Mitgeschöpf. Ein Diskussionsbeitrag des Wissenschaftlichen Beirats des Bauftragten für Umweltfragen des Rates der EKD, 1991², Paragr. 11; https://www.ekd.de/tier_1991_tier2.html.

1.4 “All things are lawful for me, but not all things are beneficial. All things are lawful for me, but I will not be dominated by anything.” (1 Cor 6: 12) – The Liberty and Obligations of Faith regarding Matters of Nutrition and a Critical-Transformative Lifestyle

Since ancient times and within Christianity, the factual, temporal and practical limitation of meat consumption has, again and again, appeared as a critical trend. The Essenes, several of the early Church Fathers (such as Jerome or Eusebius), as well as a significant proportion of the monastic orders, explicitly and completely abstained from consuming any meat (frequently with the exception of fish).⁴³ Whilst the Jewish dietary laws clearly regulated the ceremonial-religious demarcations between Jews and Gentiles, they had to be reviewed and newly defined in early Christendom at the moment that the Church proceeded to transgress the boundaries of the Jewish-Christian tradition in Jerusalem. The first great epochal change in terms of mission history – the expansion of the Church through the first Gentile Christian congregations in Antioch, and then in the Mediterranean region – implied that, for the early Christians, it was necessary to discuss eating habits beyond the Jewish dietary laws. What did it mean that – through the missionary activities of Paul, the “missionary to the Gentiles” – there were suddenly new Christians within the area of Asia Minor, who came from the Hellenistic culture and ate different foods than the early Jewish-Christian community in Jerusalem; and that they still desired to be full members and followers of the Christian faith? The famous Apostolic Council, the first ecumenical conference in church history, reflected upon the validity and reach of the Jewish dietary and cultic laws and came to the precedent-setting conclusion that new Christians from non-Jewish origins were not to be burdened by the requirement to keep the laws in their entirety (Acts 15: 10), but that – with regard to circumcision – the laws should be somewhat relaxed. At the same time however, in opposition to what many exegetes prematurely asserted, it was not that the Jewish dietary laws were invalidated entirely, but rather that their original meaning was retained in a modified form: The unconditional respect for God as the Lord of all living beings was to be demonstrated in practice by Christians of Hellenistic origin setting boundaries regarding meat consumption

43 Cf. Anselm Grün: Die Fastenpraxis der frühen Kirche und was daraus geworden ist. Heutige Möglichkeiten, in: Religionsunterricht an höheren Schulen No. 5/93, p. 291–296.

wherever respect for living beings was being violated (which entailed: abstaining from the consumption of blood, all strangled animals and those sacrificed to other idols; that is, all meat associated with the slaughter business of the priests at the temple (Acts 15:20)).

And finally, Paul enriches the early, inner-Christian debate regarding meat consumption and intercultural table fellowship with any Gentile who invited Christians to lunch or dinner, through an attitude of generosity and liberality regarding the avoidance of meat sacrificed to idols. It is important however, not to misinterpret his advice: “Eat whatever is sold in the meat market without raising any question on the ground of conscience” (1 Cor 10:25), by taking it out of its historical context and comprehending it as a plea which could endorse today’s arbitrariness and carelessness with regard to the origin and quality of meat products. The boundary for wilful and deliberate participation at the pagan sacrificial cult, including its practices of consumption en masse – which remains in power for Christians today – is that they were not to take part in the consumption of meat offered by the markets of the harbour city, Corinth, as long as they were explicitly associated with a religious practice and ideology that was hostile to life and faith (1 Cor 10:20–22). The objective of this early debate was however, not so much to engage in a discourse about meat consumption, but rather to address a missiological problem which was the avoidance of barriers to communication and contact with people who, in the first century, showed an interest in dialogue with Christians, but were themselves not familiar with any dietary laws (1 Cor 8:1–6).

It was not until a later stage of the early Christian debate that there was a continuation of this open Pauline position (within the context of Mark’s gospel with its predominately Hellenistic influence) that arrived at a more fundamental reflection, stating that it was not the type of food which defiled a person, but only that which came from within, from the heart (Mk 7:14–23). This post-Pauline context also produced a dissociation from an ethical dietary rigorism towards eating habits, which only served to build up new boundaries through the law, rather than enabling Christians to live free yet responsible lives through love in action: “Therefore do not let anyone condemn you in matters of food and drink or of observing festivals, new moons, or sabbaths” (Col 2:16).

Therefore, the most important foundational thesis of early Christian ethics regarding our meat consumption, that is tripartite in nature, includes the following points:

- a) the confirmation of our fundamental freedom of faith to take part in beneficial enjoyment: “All things are lawful,” but not all things are beneficial. “All things are lawful,” but not all things build up. ... for “the earth and its fullness are the LORD’s.” (Ps 24:1); (1 Cor 10:23.26). This Pauline conviction of the freedom of faith, which is committed to love and has deep respect for all living beings, encourages us to critically examine all natural gifts pertaining to life, including the capacity to live free from any rigorist casuistry;
- b) the exhortation to be ever-ready to critically examine one’s own lifestyle in the light of the gospel and undertake the “renewing of your minds”: “I appeal to you therefore, brothers and sisters, by the mercies of God, to present your bodies as a living sacrifice, holy and acceptable to God, which is your spiritual worship. Do not be conformed to this world, but be transformed by the renewing of your minds, so that you may discern what is the will of God – what is good and acceptable and perfect” (Rom 12:1 f.). Pauline ethics involves all dimensions of life in a comprehensive sense, including the body, and therefore, pertains to even eating habits and consumption. In addition, such ethics encourage the reader not to conform to the trends and consumer activities of this world through a constant self-critical transformation of one’s own lifestyle.
- c) A further biblical link for critical nutritional ethics is offered by a new interpretation of the fourth supplication in the Lord’s Prayer, which, for centuries, has been essential for all Christians: The traditional translation “Give us this day our daily bread” was instigated by the Latin translation of the word “epiousios” – a term which only appears once in the Greek text. This rendering does not contain the full, original meaning.⁴⁴ In addition, the Latin translation “supersubstantialis” (the “supernatural bread”, which was put forward by the Church Fathers and then interpreted as referring to the eucharist), is simply a derivative and misses the original point. It seems more obvious to translate the Greek term, which only appears in this particular instance, as “sufficient for today”, “enough for the moment” or even as “sustainable”. It is clear that, for ears that are accustomed to Jewish-Hebrew cultural habits of listening and association, the original meaning of the word refers to the manna story in Exodus 16:16 ff., in which, moving through the desert, the Israelites were bidden not to hoard or stockpile the manna given to them by God as a daily gift of food in the desert: “This is what the LORD has commanded: ‘Gather as much

44 Horst Balz / Gerhard M. Schneider: *Exegetical Dictionary of the New Testament*. Eerdmans Publishing Company. (20th January 2004) pp. 32; <https://en.wikipedia.org/wiki/Epiousios>.

of it as each of you needs, an omer to a person according to the number of persons, all providing for those in their own tents.” The supplication found in the Lord’s Prayer – interpreted in its original, Jewish sense, as it appears in the Old Testament – would thus contain a warning against overconsumption and exorbitance with regard to nutrition; anchored, as it is, in earliest times and simultaneously combined with the confidence that God, the Creator, has made all that is sufficient for a good life readily available (cf. “economy of enough”; “Ökonomie des Genug”).⁴⁵ Christians therefore pray: Give us this day our daily bread, give us good, sustainable foodstuffs! – and go on to feed themselves in line with this attitude.

1.5 **“The wolf shall live with the lamb, the leopard shall lie down with the kid” (Is 11: 6a) – The Promise of an Eschatological Kingdom of Peace Entails Hope for an Alleviation of Violence within Human-Animal Relationships**

The perspective offered by the combination of respect for all living beings, gratitude for all gifts of creation, an inclusion of animals within the understanding of God’s law and covenant order, as well as a concern for the reduction of violence in human-animal relationships, culminates in the biblical-theological perspective of an eschatological peace, which is often depicted, in the prophetic tradition, through images of the animal world that include animals: In accordance with the biblical tradition, all assertions about mankind and animals should typically be regarded within the context of the expectation of a new, different world that is at peace with and within creation. The creation story (Gen 1: 29 f.) is a constant reminder that this world, which has been extremely well crafted, did not have any experience of bloodshed amongst the animals and mankind, since both were pointed to plant-based food. It is this comprehensive peace within creation that then becomes associated with the promises of the new world that is coming: “*The wolf shall live with the lamb, the leopard shall lie down with the kid ...*” (Is 11: 6–9; cf. Is 65: 17 ff.). The biblical vision of a reduction in violence within human-animal relationships however, stands in stark contrast to the unprecedented magnitude of violence and suffering that exists within the relationships be-

45 Cf. also: Eckhard Nordhofen: *Corpora. Die anarchische Kraft des Monotheismus*, 2018; cf. the same: *Brot: Ein Hapax für jeden Tag*, 2018, in: *Merkur*, 2nd January 2018; <https://www.merkur-zeitschrift.de/2018/01/02/brot-ein-hapax-fuer-jeden-tag/>.

tween humankind and the animal world that spread as a result of the industrialised, modern age.⁴⁶

Even in the New Testament, the promise of the “*glory which shall be revealed in us*” (KJV) is not exclusively associated with the world of humankind, but is distinctly related to “the whole creation”, which “has been groaning in labour pains until now” (Rom 8: 18–22). Whilst the end of all pain and all suffering, as seen in the vision found in the Revelation of John, does not expressly involve the animal world, the cosmic and comprehensive imagery of the promise seems to include animals, when it claims that: God “will wipe every tear from their eyes. Death will be no more; mourning and crying and pain will be no more, for the first things have passed away.” (Rev 21: 4) The Christian Church is called not only to preach the gospel amongst all peoples of the world, but to “the whole creation” (Mk 16: 15).⁴⁷ The spreading of a comprehensive peace of creation that is shared by all fellow creatures, is one of Christendom’s daily supplications in the Lord’s Prayer, in which we plead: “*Your kingdom come. Your will be done, on earth as it is in heaven*” (Matt 6: 10) – and this includes the animal world. The gifts and signs of faith wrought by the spirit, and portrayed in the apostolic letters (love, peace, kindness, faithfulness, generosity and justice, cf. Gal 5: 22f.; Eph 5: 9), should also be evident in our dealings with all living creatures.

The Jewish-Christian tradition regularly reminds believers of this vision of a comprehensive kingdom of peace that includes the animals: as part of the regular weekly rhythm which starts with a “day of peace” – the Sunday or Sabbath day – believers are also connected with times of fasting and feasting throughout the ecclesiastical year which reminds Christians of certain salvatory events and thereby the disruption of historical relationships of power. In his remarkable work “Resonance: A Sociology of our Relationship to the World”, the sociologist Hartmut Rosa recently referred to the resilience of the Abrahamic religions and, in particular, their resistance to the totalising dynamics of acceleration and dynamisation found in the industrialised modern world. In his opinion, an essential factor of this resilience towards the permanent pressure of acceleration and an increase of consumption, that is found in the modern

46 In modern social sciences, it is only in the past 10–15 years that there has been a greater awareness of this within the framework of Human-Animal Studies: Sonja Buschka, Julia Gutjahr, Marcel Sebastian: *Gesellschaft und Tiere: Grundlagen und Perspektiven der Human-Animal Studies*, in: Bundeszentrale der Politischen Bildung 2012: <http://www.bpb.de/apuz/75812/gesellschaft-und-tiere-grundlagen-und-perspektiven-der-human-animal-studies?p=all>; in addition, the philosopher Yuval Noah Harari has addressed the violent relationship between the industrialised modern age and the animal world: <https://www.ynharari.com/de/topic/oekologie/>.

47 Ulrich Seidel: „... verkündet das Evangelium aller Kreatur“ – Mensch und Tier in der Verkündigung, *Jahrbuch für theologische Zoologie*, Vol. 1/2014, p. 103–125.

world, is rooted in the ancient traditions of fasting and the disruption of routine that is found in the Jewish-Christian, as well as in the Muslim, traditions.

The “temporal orders of religious beliefs, ... the conception of a saving event and a time of salvation or a sacred time, the seasonal cycle of an ecclesiastical year – all of these prove to be generally resilient towards the imperatives of innovation, acceleration or constant enhancement. Therefore, the religions which were handed down to us, certainly in their Jewish-Christian or Islamic form, seem to function – either primarily or as an ancillary – as a potentially indispensable antithesis to the modern logic of constant improvement and dynamisation.”⁴⁸

With regards to the relationships between humans and animals, this is a valuable indication that, in modern times, we have lost touch with the basic rhythms of life on many diverse levels, and have thus lost a culture of moderation and intermittent periods of respite. Therefore, as the churches remember the promise of an eschatological kingdom of peace, it is an essential task to remember that a structure of rhythmisation is needed, and one which incorporates the times of year, the life-cycle and creation. At the same time, this reminder needs to explain – plausibly and without exacting moral challenges – why our consumption does not always need to reach an ever-increased level. Here, the churches’ specific contribution towards a different kind of fulfilment and sustainable lifestyle becomes visible: It is to argue against the dictate of acceleration and increase, as well as against the total commercialisation of goods, animals and time; with the result that it will have immediate consequences in several areas, including that of nutritional and consumption behaviour.

48 Hartmut Rosa: Resonanz: Eine Soziologie der Weltbeziehung, 2016, p. 688.

2. On the Relationship between Mankind and Animals within the Context of Agricultural Production in Germany

2.1 *Animals on the Farm – The Combination of Care and Function in Human-Animal Relationships within the Context of Small-holders’ Domestic and Subsistence Farming*

With regards to relationships regarding farm animals,⁴⁹ the human-animal relationship looks back on a long evolutionary history: It was only during the Neolithic Revolution, about 10,000 years ago, that the domestication of farm animals began, alongside the cultivation of land. For centuries, the pre-industrial human-animal relationship was shaped by a wide range of animals and animal breeds, including: pigs, poultry, cattle, sheep, goats, and their diverse commercialisation by and for human beings. Not only was there produce gained through animals, such as milk and eggs, but also the entire carcass was put to use as meat for food, skins, hides, horns, and bones for the manufacturing of everyday items and clothing. Supplying individual needs through subsistence farming took centre stage. In this immediate, manageable interrelationship between animals and those who utilised them, a special relationship of respect and consideration developed, in which the animal was not exclusively reduced to its material use, but rather a kind of co-evolution between human beings and animals existed: Mankind was unable to develop without the companionship of farm animals.

This relationship also informed a special culture of domestic management which consisted of work, family, eating and social security. For many centuries, for instance, it was normal for inhabitants of villages and towns to keep small levels of livestock (for example, poultry, goats and rabbits) as a way of providing for themselves. Goats were the cows of the poor man and were often grazed along the wayside.⁵⁰ For a very long

49 The authors are aware that human-animal relationships are far wider than a relationship between human beings and farm animals. However, this study predominately investigates the latter.

50 In general, human beings can more easily digest goats’ milk than they can cows’ milk; however, it was traditionally associated with poverty and therefore seldom used later in the age of industry.

time, a high level of meat consumption was the prerogative of the wealthy (only the nobility had hunting rights) and was, again and again, criticised as overconsumption. In Germany, in 1816, the average meat consumption was around 11–14 kg per capita per year, and, at the beginning of the 20th century, it was around 40 kg per capita.⁵¹ In Germany, for many centuries before the industrialisation of agriculture and animal production, high rates of meat consumption, such as the 1990 figure of 90 kg per capita per year, were entirely unimaginable. In Germany, just as they exist in the cultures of many non-Western nations, the traditions and relevant approaches to a nutritional culture based on domestic management are rooted in pre-industrial forms of subsistence farming. These traditions and approaches were informed by economic, environmental and social cycles; all of which were closely interlinked. What is today understood to be the guiding principle of sustainable nutrition, that is: to pursue food security in a way that takes responsibility for people, animals and the environment, as well as for subsequent generations, is not unlike this early form of subsistence farming.⁵² However, it was only the sufficient, professional production of foodstuffs through agriculture that made possible the division of labour within society and thus any previous progress in terms of civilisation. Today, the return to subsistence culture can neither be the objective of industrial nor developing countries. Rather, it is critical to re-energise traditional, long-term thinking regarding the maintenance of resources, in ways that involve natural cycles and complex interrelationships.

2.2 From Farms to Agricultural Factories – The Effects of the Industrialisation of Livestock Farming on Human-Animal Relationships

With regards to animal husbandry, the decisive historical turning point in Germany is connected to the industrialisation of agriculture in the second half of the 20th century, in which the agricultural sector was “professionalised” and “scientified”. Through the use of modern technology, a substantial yield was achieved in arable farming as well as a massive increase in the efficiency of farm animals. Therefore, in terms of

51 Aurelia Moniak: Fleischkonsum in Deutschland. Entwicklung und Nachhaltigkeitsperspektiven, Hamburg 2015, p. 7; http://edoc.sub.uni-hamburg.de/haw/volltexte/2015/3166/pdf/Aurelia_Moniak_BA.pdf.

52 Further to the academic debate about the models of subsistence farming, see Christian Boldt-Mitzka: Historische Theologie der Subsistenz. Grundlagen, Geschichte und Gegenwartsbedeutung selbsterhaltenden Lebens und Arbeitens, Bremen 2015; <https://d-nb.info/1072303744/34>.

numbers, the ratio between wild animals and farm animals domesticated by human beings has shifted, tipping the scales grossly against wild animals on a global scale.⁵³ Having once been the “housemates” of human beings, animals became the “production factors” of a booming agrarian economy which was being challenged to generate a foundation for the mass consumption of meat. It was the integration of all agrarian production chains which was partly responsible for the so-called agribusiness which emerged from traditional agricultural animal husbandry, and which exposed animal farming to the extreme pressure of economic exploitation. Characteristic marks of such modern agricultural animal farming include: an increasing professionalisation and specialisation, numerical growth and tendencies towards concentration within the boundaries of the agrarian structural change and, last but not least, an increasing division of labour and the commercialisation of the entire production chain in the arenas of animal breeding, fodder production, barn building, animal hygiene, transport, slaughter, processing and reprocessing. Butchers’ shops and facilities for farm animals were increasingly specialised in terms of the division of labour and were removed from the sight of the normal population.

The East-West conflict of post-war Europe encouraged an accelerated industrialisation of agriculture, since the areas covered by the competing and racing systems spread to questions regarding nutrition and meat consumption: The first so-called “Green Revolution”⁵⁴, which was strongly promoted by Rockefeller and others, was intended to serve as an instrument to curb socialism by increasing the availability of food in the West, for a short time, by way of a commitment to input. The consequences for the relationship between humans and animals were enormous, even despite the fact that, from their well-structured, family-oriented farms, some small-scale farmers retained in their animal husbandry some elements of tradition and promoted a close-knit and caring symbiosis between human beings and farm animals. However, a massive industrialisation of agriculture and animal husbandry were the dominant factors and, in connection with these, a form of agricultural economics developed that was guided by a purely rationalistic and economically-informed understanding of science; and which, in associated agricultural training programmes – at least in its first decades –

53 Cf. Yuval Noah Harari: “Our children’s books, our iconography and our TV screens are still full of giraffes, wolves and chimpanzees, albeit that in the real world there are only a very few left. Across the globe, there are about 80,000 giraffes by comparison with 1.5 billion cattle, 200,000 wolves by comparison with 400 million domestic dogs, 50 million penguins by comparison with 50 billion hens, 250,000 chimpanzees by comparison with billions of people. Humankind has taken over and is now in charge of the world”, in: *ibid.* <https://www.ynharari.com/de/topic/oekologie/>; cf. also the same: *Eine kurze Geschichte der Menschheit*, München 2014.

54 In the 1960s, this was taken to mean an accelerated industrialisation of agriculture by means of the development of high-performance breeds and high-yield varieties, rather than an ecological revolution of agriculture as we understand today.

allocated little, if no, time and space to issues of animal – or even ecological – ethics. Farmers became academically trained, accomplished and economically-reasonable agriculturists. Family-run farms became agricultural production facilities. To a large extent, the optimum was considered to be that which was scientifically, technically and economically possible to implement, and which maximised business output and economic prosperity.⁵⁵ In the 1960s and 1970s, during the heyday of agronomic modernisation and industrialisation, ethics and morals were seldom considered; even from the viewpoint of the Church – after all, it was the rural regions in particular which benefitted economically from the upsurge of industrialised agriculture; and this is only slowly beginning to change.

Box 1: Animal Husbandry and Food Security

Positive Aspects of Livestock Farming for Food Security

Livestock farming contributes significantly to global food security. Animal protein constitutes about 33 % of the overall protein supply, as well as contributing 14 % of the total calorific intake.¹

Animal products are rich in essential micronutrients such as vitamin A, vitamin B12, iron, zinc, and calcium, etc. It is often easier for the human body to absorb these micronutrients from animal products than it is from plant-based food.²

Many of these nutrients are essential for the healthy development of children. If consumed in moderation, meat and milk products can play a positive role in health and nutrition. They effectively fight hidden hunger, particularly in children, women and the elderly. The undernourished or malnourished in developing nations are particularly prone to a deficiency in animal products, and a slight increase in the consumption of animal produce can offer great advantages to their health – especially for those who are breast-feeding or pregnant. On account of their high concentration of nutrients, milk products and meat are often well-suited to children and those who are ill, since they might only be able to eat small portions.³

Conversely, the overconsumption of animal products greatly increases certain health risks (cardiac diseases, diabetes and some cancers) and is one of the causes of overweight and obesity.⁴

Health-Compatible Meat Consumption

The German Nutrition Society (Deutsche Gesellschaft für Ernährung; DGE) recommends a healthy mixed diet, in which the yearly meat consumption of women does not exceed 20 kg per capita and the annual meat intake of men is not more than 30 kg. With regard to developing nations, the FAO postulates that every person should have the wherewithal to consume at least 7.3 kg meat per year.⁵

55 Cf. Clemens Dirscherl: Zwischen Verbitterung und Anpassung. Soziale und psychische Folgen industrialisierter Landwirtschaft, in: politische ökologie 154: Zukunftstauglich: Stellschrauben für eine echte Agrarwende, 2018, p. 56–62.

Risks for Human Health

The improvement of animal health and animal hygiene is an important precondition for the improvement of human health, across the board, and not only in developing and emerging nations. Health risks associated with farm animals persist through zoonotic diseases, antibiotic resistance, food-borne infections (e. g. salmonellae, trichosis), fine dust particles and aerosoles.

Zoonotic diseases, in particular, are hazardous to our health (e. g. avian influenza). Around 60 % of animal diseases can cause zoonotic diseases, which means that they also infect human beings. In addition, farm animals are the source of some neglected tropical illnesses. Each day, these animal diseases cause significant economic damage to animals and humans.

Additionally, animal husbandry is an important link between wild animals and our human health. About 70 % of all newly-appearing diseases that affect humankind originate from farm animals; in some cases, these diseases were previously spread amongst wild animals.

It is the poor in particular who are disproportionately affected by zoonotic diseases, since they are often in very close contact with farm animals in unhygienic conditions. In developing nations, issues of hygiene affecting water and food from farm animals lead to many unrecognised food-borne infections.

The WHO estimates that diarrhoeic diseases are the causes of 1.8 million deaths per year, effecting economic damage to the tune of 33–77 billion dollars.⁶

The Use of Antibiotics in Animal Husbandry

In terms of quantity, across the globe, animal husbandry is the area that uses the most antibiotics. It is partly because antibiotics are still used as growth-enhancers in spite of the great risks of developing an associated resistance. Resistance to antibiotics is rising rapidly on an international scale. Thus, human health may also be massively threatened on a global scale. In recent decades, the development of new antibiotic substances for human application has been a rare occurrence. However, farm animals have been given even rare reserve antibiotic agents which are limited to the treatment of humankind alone. In spite of the considerable risks to human health, the FAO anticipates that by 2030, the use of antibiotics on farm animals will have increased by 70 %.⁷

In Germany, the regulations for the use of antibiotics in animal husbandry were tightened in 2018, as part of the implementation of the German strategy to fight antibiotic resistance (Deutsche Antibiotikaresistenzstrategie DART) and was intended for reserve antibiotics in particular. Since 2014, in Germany, stricter regulations on the use of antibiotics in animal husbandry have been in place, combined with a more intensive monitoring of their use. Thus, between 2011 and 2015, the use of antibiotics almost halved.⁸

In addition, in 2018, the EU-Parliament decided that from 2021, reserve antibiotic agents would no longer be used in animal husbandry. In the future, imported fodder must no longer contain antibiotics intended for use as growth-enhancers.⁹

¹ FAO (2017): More Fuel for the Food/Feed Debate; http://www.fao.org/ag/againfo/home/en/news_archive/2017_More_Fuel_for_the_Food_Feed.html.

² Verbraucherzentrale (2018): Fleisch hat viele gute Seiten – Ernährungsphysiologie; <https://www.verbraucherzentrale.de/wissen/lebensmittel/lebensmittelproduktion/fleisch-hat-viele-gute-seiten-ernaehrungsphysiologie-5542>.

³ FAO (2014): Towards Sustainable Livestock; http://www.livestockdialogue.org/fileadmin/templates/res_livestock/docs/2014_Colombia/2014_Towards_Sustainable_Livestock-dec.pdf.

- ⁴ FAO (2018): Meat and Health; <http://www.fao.org/docrep/T0562E/T0562E05.htm>. Deutsches Krebsforschungszentrum 2018: Ernährung und Krebsvorbeugung. Kann gesunde Kost das Krebsrisiko senken?; <https://www.krebsinformationsdienst.de/vorbeugung/risiken/ernaehrung-praevention-index.php#inhalt21>.
- ⁵ DGE (2018): Vollwertig essen und trinken nach den 10 Regeln der DGE; <https://www.dge.de/index.php?id=52>.
- ⁶ FAO (2014): Towards Sustainable Livestock; http://www.livestockdialogue.org/fileadmin/templates/res_livestock/docs/2014_Colombia/2014_Towards_Sustainable_Livestock-dec.pdf.
- ⁷ FAO (2017): Synthesis - Livestock and Sustainable Development Goals; <http://www.fao.org/3/CA1201EN/ca1201en.pdf>.
- ⁸ BMEL (2018): Antibiotika in der Landwirtschaft; https://www.bmel.de/DE/Tier/Tiergesundheit/Tierarzneimittel/_texte/Antibiotika-Dossier.html;jsessionid=A369121DD48BC1C3749EE48B698BA91C.2_cid288?nn=539690¬First=false&docId=7020278.
- ⁹ EU-Parlament (2018): Bekämpfung der Ausbreitung der Antibiotikaresistenz von Tieren auf Menschen; <http://www.europarl.europa.eu/news/de/press-room/20181018IPR16526/bekampfung-der-ausbreitung-der-antibiotikaresistenz-von-tieren-auf-menschen>.

2.3 *An Appetite for Meat – I Take Meat for my Greens: Exponential Increase in Meat Consumption in Germany and its Underlying Causes*

The shift in the demand for meat is closely linked to the transition from a deficient to an affluent and consumerist society in Germany in the 1960s. Many senior citizens can still remember the now-dwindling tradition of meat only being served once a week at the dinner table (the “Sunday Roast”). In the second half of the 1960s, meat became a mass product, which is most evidenced by the fact that the average meat consumption in Germany rocketed from 35 kg per capita per year in 1950, to 79 kg per capita per year in 1970.⁵⁶ Meat became used in bait-and-switch-offers and only certain parts of animals were used for immediate consumption in Germany. The practice of exporting some of the less valuable animal parts spread and this led to great problems in developing nations (and does so today)⁵⁷, as well as in the processing of dog and cat food. Thereby, a close correspondence develops between eating habits and meat consumption on the one hand and, on the other hand, an understanding of the development of an incipient, affluent society: These shifts in nutritional preferences are understood to be a symbolic expression of personal, as well as social, wealth. The composition of one’s food reflects an individual’s social advancement: One can afford to have meat on one’s plate.

After the Second World War, the indicators which signified prosperity were regular meat consumption, holiday trips, a car and, later on, a TV – a person who was familiar

⁵⁶ Cf. i.a. <https://www.umwelt-im-unterricht.de/hintergrund/fleischkonsum-klima-und-umweltbilanz/>.

⁵⁷ Cf. <https://www.brot-fuer-die-welt.de/themen/haechchenexport/>.

with all of these was part of the middle-class prosperity model within Germany, the land of the economic miracle (Wirtschaftswunderland Deutschland). Naturally, the attitude towards meat consumption in post-war Germany was also a reaction to the war-time experience of hunger and shortage.

During the time of the German economic miracle, the focus on the satisfaction of the mass demand for meat and milk led to a comprehensive agrarian modernisation through the installation of industrial production and organising principles⁵⁸: Mechanical-technical progress, biological-technical progress and organisational-technical progress made inroads into rationalising possible – as well as an increasingly specialised agriculture, based on the division of labour.⁵⁹ In terms of animal products, such modernisation can be seen in developments within the fields of breeding, animal health, stable hygiene and animal nutrition; and these are accompanied by the constructional changes of buildings for livestock and, increasingly, the deployment of animal care technology for feeding, milking, dung-clearing and ventilation. The agrarian progress leads to a comprehensive inclusion of agriculture within the industrial society and the expansion of an industrial production of animal products through the mechanisation of animal care.

Box 2: Agriculture as an Economic Factor

Between 2008 and 2018, the primary sector (agriculture, forestry and fishery) contributed an average of 0.7% to the gross domestic product (GDP) of Germany. In 2018, it generated 16.7 billion EUR of gross added value. In 2016, about 940 thousand people were employed in the agrarian sector, amongst whom a large proportion were families (450,000) and seasonal workers (290,000). About 1.3% (540,000) of the working population obtained the largest portion of their earned income from agriculture. The number of agricultural farms is continually on the decline, whilst the average size of the farms is on the increase. Currently, there are around 270,000 agricultural farms, including 120,000 professional farms. About 70% of farms are actively engaged in commercial animal husbandry. In 2018, the sales revenue of all agricultural farms amounted to about 43.5 billion EUR, of which more than 27.4% was generated by animal products.

58 Cf. in greater detail: Clemens Dirscherl: Fleischkonsum und Tierhaltung in der aktuellen gesellschaftsethischen Debatte; http://buel.bmel.de/index.php/buel/article/view/32/Dirscherl-91_3.html.

59 One particular dimension of the history of the division of Germany, which had severe consequences for the accelerated industrialisation of agriculture – even to this day – should be mentioned: In the GDR, scientific rationality, as well as the cutting back of the old farming roots, were pursued methodically. This had a great impact upon the agricultural structure (in plant, as well as animal, production), even in reunified Germany. This applies, in particular, to the KIM poultry farms (Kombinat Industrielle Mast, KIM) which, by contrast with the industrial pig fattening farms of the GDR, were quickly or almost without interruption, successfully continued under their new owners up until today. Thus, the KIM poultry farm with its associated abattoir in Königswusterhausen has places for about 1.2 million fattening pigs; during GDR times, Haßleben, a sizeable pig farm that had about 100,000 places, has now been reduced to 37,000 places. Cf. i. a.: <http://www.lausitz-branchen.de/branchenbuch/2017/01/17/erweiterung-wiesenhof-schlachthof-koenigs-wusterhausen/>; cf. also: https://www.proplanta.de/Agrar-Nachrichten/Tier/Gericht-stoppt-Schweinemastanlage_article1508215064.html.

As a result, in Germany, agriculture does not have a great macroeconomic importance in a quantitative respect. By comparison, the automobile industry contributes around 4.5% to the GDP, and makes up 2% of the labour force; the figures for the healthcare sector are about 12% and 13% respectively.

Irrespective of the relatively small contribution that agriculture makes towards the GDP and the employment sector, German agriculture has rather a significant economic importance, since:

- It feeds the population. With regards to most agricultural produce, the level of self-sufficiency clearly exceeds 100%. Exceptions to this are fruit, vegetables and eggs, for which Germany is a net importer (BMEL 2016, p. 5).
- German households spend about 14% of their expenses on food (2016).
- At nearly 17,000 ha, agriculture uses about 50% of the total soil surface, of which nearly three quarters serves as either pasturage or for the production of fodder.
- Finally, agriculture and forestry have, by now, an important role to play regarding the supply of energy. The proportion of their produce that is used for heat and fed into the mains electricity supply amounts to nearly 8% or 12% (BMEL 2016, p. 5).

Sources: Statistisches Bundesamt (www.destatis.de, 14.01.2018); BMEL 2016 (Landwirtschaft verstehen, Berlin 2016); BMEL 2019: Landwirtschaftliche Gesamtrechnung; <https://www.bmel-statistik.de/landwirtschaft/landwirtschaftliche-gesamtrechnung/>.

Meat was presented as a modern foodstuff, as “a piece of vitality”, as the advertising slogan of the meat industry purported, which also gave a new social value to our quality of life. “Possession is nine-tenths of the law” was a motto which accompanied dietary habits that were entirely free from any form of calorie counting, even in terms of portion size: Meat and sausage, cheese, cream, butter, eggs, bacon – all of these became the hallmarks of wealth and prosperity; and recognisable in the so-called “spare tyre” of the population. Meat became a food source that was available to everyone at affordable prices and part of the daily diet. Developments in the GDR had their own part to play in the transition towards a more meat-oriented understanding of prosperity: Herein, it was not so much the special offers in the supermarkets, but the additional offers of meat on important socialist days – that were specifically controlled by the politbureau – which reinforced the new nutritional doctrine of a markedly meat-rich diet. In exaggerated terms, one might have said: “Meat is the opium of the people”.⁶⁰

60 At 94 kg per person/year, meat consumption in the GDR was higher than in the BRD: <http://kiezschreiber.blogspot.de/2014/11/die-ddr-fakten-zum-alltaglichen-leben.html>; cf. also: Fleischverzehr in der DDR. Der Broiler und die Partei, in: <http://www.taz.de//5095133/>; for a more detailed background of the Socialist Unity Party's agricultural policy and its effects on meat production and consumption, cf. the detailed study by Anett Laue: Das sozialistische Tier: Auswirkungen der SED-Politik auf gesellschaftliche Mensch-Tier-Verhältnisse in der DDR (1949–1989); Köln 2017. Alongside extensive chapters on “pets” and the “organised protection of animals in the GDR”, this study proves to be interesting mainly on account of the chapter on “farm animals” in the GDR, in which it is made clear that animal welfare altogether fell by the wayside through the totalisation of industrial production methods within animal husbandry and “meat production”.

Other significant factors for the spreading popularity of industrial agriculture and animal husbandry were the global East-West conflict and the ensuing competitive situation, whereby both sides were keen to display high rates of meat production as being symbolic of an equal status, or even the superiority of one of the two systems.

2.4 *Where Does our Meat Come from Today?* – Facts, Figures and Trends regarding Rationalised and Computerised Animal Husbandry in the German and European Meat Trade Respectively

In the 1980s, an increasing acceleration and internationalisation of all areas of life, including the agrarian sector, took place: The European Union was ever-more enlarged, international relations to South America and the four East-Asian, so-called tiger states intensified and communication technology developed at a tremendous pace; and this trending acceleration and globalisation within society also affected meat consumption. The Fast Food-culture from the United States established itself in Germany and, second in line to the German sausage, the so-called burger entered the market as fast food. Correspondingly, so-called convenience products emerged, consisting of a broad variety of ready meals which were partially or fully prepared and, increasingly, sold in a frozen form; and all of them were produced with the most diverse standards of preparation and quality.

Box 3: Economic Significance of Global Animal Husbandry

Livestock production contributes less than 1.5% to the global economic output. However, the animal husbandry sector amounts to a mere 40% of the global proportion of value added. In industrialised countries, animal husbandry produces around 53% of the agricultural added value.

About 900 million people are currently living beneath the poverty threshold of 1.9 dollars per day. In terms of finance, around half of these are directly dependent upon livestock farming. Of these, around 450 million are impoverished livestock farmers, and two thirds of these – that is, 290 million – are women. On a global scale, about 1 billion deprived and extremely deprived people live on the proceeds from livestock farming.¹

For such people, animal husbandry is often the last economical resource available to them (animals act as living savings banks). In a financial crisis, animals can be sold and microloans for breeding animals can be obtained. However, substantial deficits persist in the logistics and marketability of animal products. For animal husbandry to be in a position to contribute substantially to poverty reduction, there needs to be more opportunities for market participation.

Alongside the provision of high quality nutrition involving animal protein, livestock production has additional positive social and cultural functions. In addition to their nutritional function, livestock can be used, for example, as draught animals or pack animals; their dung can be used as fertiliser and fuel; and their skin can be used for leather, etc.²

With regard to the keeping of small domestic animals (including small ruminants such as sheep and goats, poultry) – and depending upon the tradition – it is often the women in developing nations who undertake this responsibility; at times, even keeping dairy cows. For the women, these animals are an important source of income. Since this is a growing sector and somewhat labour-intensive, it offers additional sources of employment for women. However, they often lack access to resources such as capital and land.

The animal husbandry sector and the ensuing industries such as abattoirs, are expanding globally on a large scale. In developing nations, the farm animal sector is one of the fastest growing economical sectors (2.5% per year during the last two decades).³ These developments however, also cause new problems through child labour and risks relevant to health and safety standards in livestock production. Child labour is widely used for the herding of livestock and animal care. At 5 to 7 years of age, children begin to work as herders, which in turn, greatly limits their school education.⁴

Professionalisation of Livestock Farming Practices

In many developing and emerging nations, livestock farming has, so far, been rather ineffectual and seldom sustainable. A broad range of measures for the improvement of labour productivity, as well as for the professionalisation of livestock farming practices, is needed within the areas of animal fodder, animal health, livestock breeding, sustainable grazing management, the prevention of zoonotic diseases, food hygiene, etc.

The great potential for the generation of income can only become a reality if substantial improvements, by comparison with today's practices, are implemented. A sustainable expansion of the number of livestock as well as efficiency enhancement on the side of farm animals, is only possible if there is also a corresponding transfer of know-how and technology, a development of the infrastructure, a certain level of practice-related research and innovation, and an increased level of knowledge among animal husbandmen, breeders, and veterinaries, etc.⁵

Urban Animal Husbandry

For the first time in the history of humankind, on a global scale, there are more people today who are living in cities than there are in the countryside. About 800 million city residents in developing and emerging countries are engaged in urban agriculture – from the growing of vegetables to the keeping of farm animals. In cities, farm animals such as domestic pigs, hens, goats or even cattle, are kept as a means to achieve food self-sufficiency and to generate income. In urban regions, the further processing of animal products, for example, can be a good source of income for women. In the densely populated cities however, urban livestock farming poses enormous risks in terms of hygiene and infection.⁶

Different Livestock Farming Systems Across the Globe

Even in the future, across the globe, very diverse livestock farming systems will continue to exist alongside each other. The modern, highly intensive livestock farming facilities – e.g. those in China – are expanding very quickly. Comparably traditional, extensive practices are retained in other parts of the world.

Up until today, grazing livestock farming by so-called pastoralists (pastoral tribes) has, in some regions of the world, had great ecological and nutritional importance. In 2018, the FAO estimated here to be 200–500 million pastoralists⁷ who produced about 10% of the total global amount of meat. By comparison with established farmers on the African continent, 50–70% of the milk, beef and lamb produced by grazing livestock farming was produced in the arid regions of Africa, where arable farming is not possible because of a lack of water and soil quality.⁸ For the developing nations, the annual growth of 3% within the animal farming sector is also expected to continue in the coming years. It will only become possible however, for the expected global expansion of meat production to take place on the prognosticated scale, through fundamental changes in livestock farming systems. It is likely that the intended growth will predominately occur on large farms. The technology and capital-intensive livestock farming practices, which include the very large, highly professional mast systems of the industrial nations, will be transferred to the greatly increasing markets of the emerging nations.

Small animal husbandmen will increasingly be cut out, unless they are purposefully promoted, as they will be unable to contend with the competitive situation and increasing standards, etc.⁹

¹ FAO (2017): Synthesis – Livestock and Sustainable Development Goals; http://www.livestockdialogue.org/fileadmin/templates/res_livestock/docs/2016/Panama/FAO-AGAL_synthesis_Panama_Livestock_and_SDGs.pdf.

² FAO (2018): Dairy Development's Impact on Poverty Reduction; http://www.livestockdialogue.org/fileadmin/templates/res_livestock/docs/2018_Ulaanbataar/Dairy_Development_s_Impact_on_Poverty_Reduction.pdf.

³ S. footnote 2.

⁴ Ibid.

⁵ FAO (2014): Towards Sustainable Livestock; http://www.livestockdialogue.org/fileadmin/templates/res_livestock/docs/2014_Colombia/2014_Towards_Sustainable_Livestock-dec.pdf; BMEL (2018): Global Forum for Food and Agriculture 2018: Die Zukunft der tierischen Erzeugung gestalten – nachhaltig, verantwortungsbewusst, leistungsfähig; <https://www.bmel.de/SharedDocs/Downloads/Ministerium/Beiraete/Agrarpolitik/GAP-GrundsatzfragenEmpfehlungen.pdf>.

⁶ S. footnote 2.

⁷ Cf. FAO (2018): 7th Capitalization Meeting, Pastoralism in the world; <https://de.slideshare.net/FAOoftheUN/pastoralism-in-the-world>; s.a. FAO (2019): Pastoralist Knowledge Hub; <http://www.fao.org/pastoralist-knowledge-hub/en/>.

⁸ Nori, M., Taylor, M. and Sensi, A. (2008), Browsing on Fences: Pastoral land rights, livelihoods and adaptation to climate change. Issue paper. International Institute for Environment and Development, Nottingham, UK.

⁹ FAO (2018): Shaping the future of livestock; <http://www.fao.org/3/i8384en/i8384EN.pdf>.

At the beginning of the new millenium, a bargain-hunter mentality was dominant amongst German consumers. The effects of the guiding principle “avarice is cool” were also evident amidst the sale of meat products. Instead of quality, regional goods from butchers, self-service meat counters became the prevalent trend due to a more im-personal preference in the discounterisation of shopping habits. The food retail sector discovered that meat and sausage products were effective teasers for consumers and, even today, shops attempt to beat the competition by advertising the lowest prices.

The rationalisation of meat consumption led to a narrowing of the choice of products involving meat. This corresponds to a general trend towards a reduction in the time

required to prepare food. A broad range of standardised, prepackaged, ready-to-fry meat products, of an equivalent quality, and ready for consumption, are offered to the consumer today at the self-service meat counters within the retail business. The former, holistic meat consumption that is associated with rural culture, has developed into a highly specialised form of nutrition: Only certain cuts of meat are preferred by the consumers. The heart, kidneys, lungs, liver and brains are rejected by a majority as being inferior – even as “disgusting” in a cultural sense – and whole roasts are increasingly disappearing from the menu at increasing rates. In their place, inexpensively produced cuts of meat are now dominant in the supply of goods. The classic pork or beef roast – be it rolled, braised, or a marinated pot roast – are increasingly being replaced by skewers, strips, pieces of sirloin, steaks, escalopes and meat balls; items which can be prepared rapidly in a pan or on a grill, rather than requiring long boiling or baking times in pot or oven. By contrast with such forms of meat consumption, a new, social trend is becoming more apparent: an understanding that the quality of the end product is connected with the quality of the process: in other words, the feeding, transport and slaughter of the animals that provide the meat.

In 2017, meat consumption in Germany amounted to 88 kg per capita/year, of which 20% was wasted: “a third of the pigs end up in the dumpster and not in the stomachs of the consumers”, and therefore suffer in vain, was the title of a report made by one TV programme.⁶¹ However, even the figure of 60 kg meat/capita/year that is actually consumed corresponds to somewhere between double and triple the amount of that which is recommended as a healthy and appropriate level by nutritional medicine experts and the German Nutrition Society. It is interesting to note that meat consumption varies according to gender and social class: Men consume, on average, 1,120 grams of meat per week, whilst women consume 580 grams per week. Men eat more meat and are more eager to eat meat than women – almost a third of German men, but only nearly 13% of women indicate that they eat meat more than four times per week. Experts point out that there is a paradoxical trend: an increasing number of animals are slaughtered in Germany, whilst the actual meat consumption of the German population has the tendency to slump a little.⁶² This tendency is caused by an increased growth in the level of meat exports of large German abattoirs. The German meat industry (Germany is the third-largest meat exporter worldwide) meets a substantial proportion of the global demand for meat imports, especially from Chi-

61 <http://www.3sat.de/page/?source=/ard/sendung/174367/index.html>.

62 <https://de.statista.com/statistik/daten/studie/36573/umfrage/pro-kopf-verbrauch-von-fleisch-in-deutschland-seit-2000/>.

na (similarly, Germany's largest slaughtering business, Tönnies, has an export rate of about 50%).⁶³ Since the turn of the millennium, the export of German meat and milk products to China has increased thirty-fold; and thus, the trend towards "factory farming" in Germany remains unbroken, despite a slight decrease in the level of meat consumption within the domestic market.

Box 4: "Large-Scale Livestock Farming"

Whilst there is no exact definition of the term "factory farming", often, appellations such as intensive livestock farming, industrial animal production, mega barns, agrarian factories or industrial or commercial animal husbandry are used synonymously. In part, these are political terms used in fierce debate. In addition, the expression "rural animal husbandry" often lacks definition when it is used to identify the very opposite. In 2017, the Protestant Lutheran Church in Northern Germany commented on these problems in a very refined and sophisticated manner by way of its discussion paper "Zwischen Landwirtschaft und Industrie" (between agriculture and industry).

It is important that the discussion regarding "intensive livestock farming" does not solely focus on there being a large number of animals per barn unit or per location. Rather, since it is quite typical that this kind of livestock farming is not limited to a certain agricultural area, the animal population of the farms can often be so great that the farm land is neither able to produce the necessary fodder nor absorb the dung as fertiliser.

With regard to the issue of land-bound livestock farming, one needs to differentiate between *livestock density* (Livestock Standard Units per ha; LSU/ha) and the *absolute upper bound regarding the herd size* per farm. In addition, the Netherlands introduced regional upper bounds regarding livestock herd size.

As specified by the Federal Building Code (Baugesetzbuch), an "agricultural farm" is one which produces the fodder that is needed to feed its own livestock. Amongst other privileges, holdings which conform to such a definition are granted a prerogative regarding the construction of new buildings on their land. In the case of newly constructed barns, these farms need to comply with considerably fewer legal obligations than those of "commercial livestock farming". In the case of commercial livestock farming, for example, in order to be granted approval for facilities to be used in intensive factory farming, a farm would need to obtain official permission in line with the Federal Control of Pollution Act. In addition, large livestock farming facilities need to make provision for an environmental impact assessment to be conducted.

Often, "factory farming" is accompanied by a regional concentration of livestock farming enterprises, as is the case, for example, in regions such as Vechta and Cloppenburg. Whilst the cluster formation of livestock farming has diverse economic advantages with regards to logistics, slaughtering and the sharing of best practice amongst the veterinarians, etc., at the same time, this spatial concentration can lead to significant regional environmental pollution. Strong emissions of odours, ammoniac,

63 <http://www.sueddeutsche.de/wirtschaft/lebensmittelindustrie-in-deutschland-wird-mehr-geschlachtet-als-je-zuvor-1.2850521>; cf. also <https://www.zeit.de/wirtschaft/2018-01/fleischatlas-fleischkonsum-deutschland-2018>.

aerosols, fine particules or greenhouse gases may occur. Soil and water pollution through nitrates and phosphates can be caused by overfertilisation. High, regionally specific risks persist, for example, with regard to the fight against animal epidemics. For several decades, there have been political discussions as to whether and how animal farming can be bound more closely to the land area of the farms.

With regard to factory farming, there are specific challenges concerning animal health. The system underlying intensive livestock farming is rather knowledge- and capital-intensive. For instance, it involves the deliberate selection of certain, highly productive breeds of animals (often hybrid species of hens and pigs), the use of modern reproduction technology, the digitalisation of animal nutrition, the automatisisation of stable or barn management and detailed animal health management.

The issue of animal welfare however, is not directly dependent upon the size of the animal population. Rather, there are much more important aspects such as selective breeding, livestock density, an animal welfare-oriented design of stables and barns, a good climate within each stable, a need-based feeding system and good animal management skills on the part of the livestock handlers, etc. There are suitable, aggregated indicators for animal welfare which point towards behavioural disorders, for example: feeding state, injuries, levels of dirt, excessive mortality rates of animals, carcass rate, the average number of lactation periods, etc.

The question as to the size of the animal population however, plays a decisive role in the case of the spread of animal diseases. Infectious diseases, parasites and animal epidemics can grow quickly and extensively where there are large groups of animals. Since the treatment of individual animals is frequently impossible, antibiotics, for example, are widely used; and they can create equally strong antibiotic resistances as a result.

Sources: Evangelisch-Lutherische Kirche in Norddeutschland: Zwischen Landwirtschaft und Industrie. Diskussionshilfe zur Tierhaltung am Beispiel der Situation in Mecklenburg-Vorpommern. Evangelisch-Lutherische Kirche in Norddeutschland, 2017; https://www.kda-nordkirche.de/fe/Beitraege/Landwirtschaft/Zwischen-Landwirtschaft-und-Industrie_2017.pdf; Wissenschaftliche Dienste des Deutschen Bundestages (2017): Besatzobergrenzen in der Tierhaltung. Rechtliche Steuerungsmöglichkeiten des Bundes. Cf. also Kayser, M., Schlieker, K., Spiller, A. (2012): Die Wahrnehmung des Begriffs „Massentierhaltung“ aus Sicht der Gesellschaft, in: Berichte über Landwirtschaft 90 (3). 417–428.

2.5 From the Animal as our Fellow Creature to the Animal as a Meat Product – The Increase of Yield and Efficiency at any Cost; as well as the Consequences

Accompanying the economisation and rationalisation of animal husbandry and meat production, there occurred a profound change in people's attitudes towards animals – attitudes which may indeed be called two-faced: On the one hand, within the area of pet-keeping, one can observe a certain emotionalisation and, to some extent, an anthropomorphising of our relationship with animals. On the other hand, within

the area of livestock-keeping, one can detect a radical trend towards a mechanisation, objectification and instrumentalisation of animals, with the latter still being regarded as a purely material industrial product.⁶⁴ The philosopher Precht summarises this in his contemporary hypothesis: “Never before was the gulf so large – the gulf which separates that which people consider appropriate in their dealing with animals, and that which is actually practiced.”⁶⁵ The background to this is indeed that the animal population in Germany has continuously and extensively increased due to the structural changes in agriculture during recent years. Connected with this is a thorough rationalisation of animal husbandry, accomplished under economically optimised conditions (“economics of scale”), through the deployment of all manner of technological advantages including mechanisation, automatisisation and robotisation; a move which is now dictated to by the notion of increased efficiency and profit at any cost. All essential areas, from breeding (e.g. cloning), to selective breeding (e.g. the killing of male chicks)⁶⁶, feeding, health and barn management, are subject to the stipulation that, as far as possible, there should be an improvement in performance and efficiency. The relevant evidence can be seen statistically in terms of a rapid growth in the average numbers of, for example, piglet litters, slaughter weight, as well as in milk and egg yields.⁶⁷

Thus, the principle of industrial Taylorism (a theory regarding the scientific management which analyses and synthesises workflows) has found its place even in animal husbandry. Today, most of the agricultural enterprises no longer correspond to the traditional image of a farm with diverse live stock, but rather, they specialise to the point of becoming production facilities. Therefore, pig fattening farms have been managed by successively separating the work into specialised production processes based upon the division of labour, so that a distinction is made between the keeping of sows, the breeding of piglets and the fattening of pigs and piglets; so much so that these activities are undertaken in different production centres. On the one hand, such specialised, large farms are able to afford the relevant professional staff who have received qualifications in specific training and further training, and with whom they can focus on a single branch of the industry in a highly professional and

64 Cf. the research undertaken for the ARD programme: “Geliebt, gequält, getötet”, 2018: http://www.ard.de/home/ard/Geliebt_gequael_t_getoetet_Mensch_und_Tier/4628594/index.html.

65 Cf. from an article about his book: Richard David Precht: *Tiere denken: Vom Recht der Tiere und den Grenzen des Menschen*, 2018; <https://www.zeit.de/angebote/buchtipps/precht-3/index>.

66 Even in cattle farming, selective breeding is, at times, applied: the animals are “sexed”, in order to obtain female offspring for dairy cow farming through embryo transfer.

67 Cf. for example: Deutscher Bauernverband, *Situationsbericht 2016/2017: Trends und Fakten zur Landwirtschaft, Landwirtschaft im Jahrhundertvergleich*; <http://media.repro-mayr.de/49/664449.pdf>.

competent manner. On the other hand, there is a risk of “technological tunnel vision”, whereby the animal is purely regarded as a production factor, or rather, a biological reactor, which, due to the workload that needs to be managed in ever more numerically large animal populations, coupled with a technologically fixated form of data management, makes it difficult – almost impossible – to deal with animals in an empathetic way.

Box 5: Ecological Animal Husbandry

In ecological farming, substantially higher standards are imposed upon a form of husbandry that is compatible with animal welfare than there are required in the conventional sector. This applies to, for example, the requirement to provide a larger living space for the animals in the barns, grounds for grazing and a demand-actuated basic feeding system, and the avoidance of any non-curative procedures, etc. The guiding principle in ecological agriculture is to create a form of animal husbandry which is as species-appropriate as possible and which facilitates the enjoyment of species-specific behaviours, as well as facilitating a high standard of animal health.¹

The inspection of ecofarms is undertaken regularly by the state, as well as by organic farming associations. The requirements specified in the EU-Regulations on organic farming express lower standards of animal husbandry than those that are stipulated by the approved German organic farming associations.²

In ecological farming, animal husbandry is bound to the land. The total livestock density should not exceed the threshold value of 170 kilograms of nitrogen per year per hectare of land used for agricultural production (this corresponds to 2 large livestock units/ha). Animal feed should, to the greatest possible extent, be produced by the farm. It is for this reason that, for example, imported soy protein concentrate cannot be fed to the animals.

The coupling of crop farming and animal husbandry, which was once foundational for organic farming, has, in part, collapsed during the process of farm specialisation. In order to maintain soil fertility, fertiliser-corporations have sprung up.³

In regards to organic farming, despite the high standards of animal husbandry that have been established, there are also some specific problems as well as a potential for improvement with regards to animal welfare and animal health. Within the spectrum of organic farms, there are numerous initiatives which are quite self-critical in their scrutinisation. Here too, lies a conflict between the goals of animal welfare, economy and the workload of the animal husbandmen.⁴

There are problems, for instance, with parasitic diseases and feather pecking amongst organic hens. The long distance transportation of animals from farms to the particular abattoirs that undertake the slaughtering process of the organically reared animals can be regarded as questionable by some and stressful for the animals, since there are only a few such slaughterhouses in decentralised locations. In addition, preventative approaches which promote animal health also need to be extended. Thus, even amongst organic hens, there are parasitic diseases and feather pecking.

In Germany, in 2016, the proportion of organic meat produced, in relation to the total meat sales, was distinctly below 2%.⁵ In 2017, the proportion of organic milk, in relation to the total quantity of milk recorded, amounted to 3.1%, – and continued to rise.⁶ In 2015, the proportion of organic eggs bought by private households accounted for 11.5% of the total sales of fresh eggs.⁷ In 2017, the sales share of organic meat and organic fish, in relation to the total consumption of meat and fish in Switzerland, came to 5.6%.⁸ In Denmark, in 2017, the proportion of organic meat (denoted in terms of its value) in relation to total meat sales, was 8%.⁹

¹ Ökolandbau.de (2018): Grundlagen der ökologischen Tierhaltung; <https://www.oekolandbau.de/erzeuger/tierhaltung/grundlagen/>.

² Umweltinstitut München e.V. (2014): Unterschiede zwischen der EU-Verordnung Ökologischer Landbau und den Richtlinien der Anbauverbände Bioland, Naturland und Demeter; https://www.umweltinstitut.org/fileadmin/Media/Downloads/07_FAQ/Lebensmittel/vergleich_richtlinien.pdf.

³ BLE (2018): Ökologische Tierhaltung; <https://www.praxis-agrar.de/tier/artikel/oekologische-tierhaltung/>.

⁴ Bioland (2014): Große Koalition für höchstes Tierwohl. Bioland, Demeter und Naturland führen gemeinsames Kontrollverfahren ein; <https://www.bioland.de/presse/presse-detail/article/grosse-koalition-fuer-hoehchstes-tierwohl.html>.

⁵ <https://www.foodwatch.org/de/informieren/bio-lebensmittel/mehr-zum-thema/zahlen-daten-fakten/>.

⁶ <https://www.topagrar.com/markt/news/biomilchpreise-auf-rekordniveau-9372414.html>.

⁷ <https://www.oekolandbau.de/haendler/marktinformationen/marktberichte/nachfrage-nach-bioeiern-erreicht-spitzenwert/>.

⁸ Biosuisse (2018): Marktspiegel Biofleisch 2018; https://www.bioaktuell.ch/fileadmin/documents/ba/Markt/Fleisch/2018_04_Marktspiegel_Biofleisch.pdf.

⁹ Ökolandbau.de (2018): Bio in Europa <https://www.oekolandbau.de/haendler/marktinformationen/marktberichte/bio-in-europa/>.

The “technological tunnel vision” apparent in the practices employed in animal husbandry, corresponds with the substantial blank space, or rather, the complete non-existence of animal ethics within the traditional agricultural education and training, or rather, within agronomic studies. Since in qualified jobs and study courses within the agricultural sphere, ethical discourse has long since been either systematically suppressed, or at least neglected, any important insights have therefore not been passed on to future generations of well-qualified agriculturalists. As a consequence, problems affecting communication have arisen between the Church and the field of agriculture, and continue to affect their interaction even today: A number of young – and some older – extremely well-qualified and academically-trained agricultural engineers are unhappy about the way in which their production methods are criticised from the perspectives of both the Church and development policy, asserting that they are only implementing the agricultural production practices that the accredited, modern, agricultural sciences have taught and recommended for decades, at universities and polytechnics. The process of beginning a supplementary and alternative, holistic agronomy which will be incorporated into the training and

study courses of future agriculturalists, and will thus enable the gaps to be bridged, is a gradual one.⁶⁸

2.6 *This Sausage was Once an Animal – Beginnings of a New Discourse regarding Animal Welfare*

In the 1990s, a movement emerged in German society as a counter balance to the one-sided definition of wealth as indicated by the scale of meat consumption. At this time, there was an increasing ecologisation of the debate surrounding nutrition; a debate which had already begun in the 1980s (and intensified after Chernobyl) and which manifested as an alternative movement in small organic shops, or rather, within the nature conservation movement. In the 1990s, the organic craze started rather cautiously within certain social niches and without a substantial economic effect to reverse the then-contemporary trend. At first, critical voices were raised which asked questions with regard to an unbridled and continuously growing meat consumption. With slogans such as “This sausage was once a pig”, consumers’ awareness was raised and, in part, a new marketing of organic meat was implemented; one in which there was an awareness of the fact that, behind every meat product, there is an individual animal that once had a more or less happy life.⁶⁹ Consumers were reminded of this fact using slogans such as: “Only eat what you are prepared to kill yourself.”⁷⁰

Whilst the establishment of animal protection within the German constitution (Grundgesetz), at the beginning of the new century, did not cause a change in social awareness, it does, however, express it, and is thus an important political milestone: Germa-

68 Deutscher Bauernverband 2019: Situationsbericht 2018/2019; <https://www.bauernverband.de/35-arbeitskraefte-und-ausbildende-807292>. The level of vocational training of farmers has clearly risen in recent years, particularly amongst young operating managers within Germany. In 2016, 35% of operating managers had exclusively gained practical experience in agriculture and 65% of all agricultural managers had completed their agricultural vocational training. Of these trained managers, 12% had a university degree.

69 Cf., for example, an online-shop selling sausage products that took pictures of individual pigs used in the production of the sausages, in order to substantiate the company’s claim to a form of animal husbandry based on animal welfare. <https://www.tz.de/welt/wurst-zeigt-bilder-verarbeitetenschweinen-1612246.html>.

70 The dictum “Only eat what you kill yourself” is found, e.g. in recent philosophical approaches to animal ethics, such as that of Richard David Precht: *Tiere denken. Vom Recht der Tiere und den Grenzen des Menschen*, 2016; cf.: <https://www.faz.net/aktuell/feuilleton/buecher/rezensionen/sachbuch/richard-david-precht-veroeffentlich-buch-tiere-denken-14485452-p2.html>. This dictum is quoted in a number of variations; and used equally in debates about raising awareness around meat consumption and organic farming, cf. e.g. the case study of organic farmer and agricultural producer of organic piglets, Bernd Schulz, who originates from East Germany and whose story appears in a 2012 article in the newspaper “Die Welt”: <https://www.welt.de/regionales/berlin/article13884221/Verbraucher-waehlen-Schwein-fuer-ihre-Wurst.html>.

ny was the first country within the European Union to include animal protection in its constitution (Grundgesetz); and did so in 2002. At the same time, the first discussion papers regarding the protection of diverse groups of livestock (hens [1995], turkeys [2001] and pigs [2004]) were agreed within the EU (through *The Standing Committee of the European Convention on the Protection of Animals kept for Farming Purposes*).⁷¹

Alongside the intrinsic importance of animal welfare, the old, key conviction that animal welfare is linked to human welfare, or is even a constitutive factor, is gaining new momentum. The voices within society that called into question the “political correctness” of food, the moral profile of meat products, and thereby also the ethical legitimacy of the consumption of meat, are gaining credence. In connection with this, towards the end of the 1990s, fundamental questions were asked relating to a paradigm change within the agrarian economy and food industry; to such an extent that an “agricultural turnaround”, a “nutritional turnaround” or “consumption turnaround” were called for.⁷²

Box 6: Animal Welfare

Originally, the debate about animal welfare focussed on farming animals and therefore, pets were not included. In the English-speaking world, the term that is widely used is “animal welfare”; a largely equivalent translation in German is “doing justice to animals (Tiergerechtigkeit)”. The latter is the expression that is most frequently employed in the technical arenas relating to the debate. In the 1980s, the British Farm Animal Welfare Council (FAWC) developed the concept of the “5 Freedoms” as a basis for the assessment of animal welfare:

- Freedom from hunger and thirst – that the animals have access to fresh water and healthy, substantial fodder.
- Freedom from discomfort caused by husbandry conditions – that the animals are suitably accommodated, for example, on adequate lying surfaces.
- Freedom from pain, injuries and illnesses – that the animals are well provided for through quick diagnosis and treatment, as well as the eschewal of amputations.

71 Cf. Council of Europe: Europäisches Übereinkommen zum Schutz von Tieren in landwirtschaftlichen Tierhaltungen – Empfehlungen in Bezug auf Haushühner der Art Gallus Gallus; https://www.bmel.de/SharedDocs/Downloads/Tier/Tierschutz/GutachtenLeitlinien/EU-HaltungHaushuehner.pdf?__blob=publicationFile; Europarat: Europäisches Übereinkommen zum Schutz von Tieren in landwirtschaftlichen Tierhaltungen – Empfehlungen in Bezug auf Puten (*Meleagris gallopavo ssp.*); https://www.bmel.de/SharedDocs/Downloads/Tier/Tierschutz/GutachtenLeitlinien/EU-HaltungPuten.pdf;jsessionid=AC01B2B4317CE210A245AF80F24B778E.2_cid288?__blob=publicationFile; Europarat: Europäisches Übereinkommen zum Schutz von Tieren in landwirtschaftlichen Tierhaltungen – Empfehlungen für das Halten von Schweinen; https://www.bmel.de/SharedDocs/Downloads/Tier/Tierschutz/GutachtenLeitlinien/EU-HaltungSchweine.pdf?__blob=publicationFile.

72 Cf. i.a.: Greenpeace: Kursbuch Agrarwende 2050. Ökologisierte Landwirtschaft in Deutschland; https://www.greenpeace.de/sites/www.greenpeace.de/files/publications/20170105_studie_agrarwende2050_lf.pdf; Karl-Werner Brand (ed.): Von der Agrarwende zur Konsumwende? Die Kettenperspektive. Ergebnisband 2, Band 5 (der SÖF-Buchreihe), 2006; http://www.konsumwende.de/aktuelles_fr.htm; ebenso: <http://ernaehrungsdenkwerkstatt.de/public-health-nutrition/nutrition-policy/ernaehrungswende.html>; <https://www.presseportal.de/pm/7666/3845072>.

- Freedom from fear and stress – that through good practices and management, fear and stress are avoided, for example, by refraining from the use of herding aids.
- Freedom to live out normal patterns of behaviour – that the animals are able to behave in ways that are appropriate to their specie, e.g. they have sufficient, available space.

In order to assess these aspects, indicators were developed which are not, however, generally accredited.¹

Acute shortcomings in the guarantee of animal welfare, e.g. in pig husbandry within Germany, are being noted by the general public and discussed with increasing intensity.²

The German Animal Welfare Act (Tierschutzgesetz)³ identifies the purpose of the law (§ 1) as follows: “The aim of this Act is to protect the lives and well-being of animals, based on the responsibility of human beings for their fellow creatures. No one may cause an animal pain, suffering or harm without good reason.” § 2 specifies the criteria for animal husbandry:

“Any person who is keeping, caring for, or required to care for, an animal:

1. must provide the animal with food, care and housing appropriate to its species, its requirements and behaviour;
2. may not restrict the animal’s possibility of species-specific freedom of movement to such an extent as to cause the animal pain or avoidable suffering or harm;
3. must possess the knowledge and skills necessary for providing the animal with adequate food, care and housing in accordance with its behavioural requirements.”

“Animal Protection in the Constitution” (since 2002 in the Grundgesetz)

Grundgesetz⁴, Article 20a: “Mindful also of its responsibility towards future generations, the state shall protect the natural foundations of life and animals by legislation and, in accordance with law and justice, by executive and judicial action, all within the framework of the constitutional order.” The debate about animal protection recognises that animals have cognitive abilities, perceptibility and sentience.

¹ <https://www.thuenen.de/de/thema/nutztiershyhaltung-und-aquakultur/wie-tiergerecht-ist-die-nutztierhaltung/wie-sich-tiergerechtigkeit-messen-laesst/>.

² Albert Sundrum: Tierschutzmängel in der Schweinehaltung – Erläuterungen zum aktuellen Stand. Wissenschaftliches Gutachten, 2019; https://www.uni-kassel.de/fb11agrar/fileadmin/datas/fb11/Tierernahrung_und_Tiergesundheit/Dokumente/Gutachten_Tierschutzmaenge_in_der_Schweinehaltung.pdf.

³ <https://www.gesetze-im-internet.de/tierschg/BJNR012770972.html>.

⁴ <https://www.gesetze-im-internet.de/gg/BJNR00010949.html>.

There are critical questions such as the million-fold culling of male chicks through maceration. How can one justify denying male chicks the right to life, merely because, due to the fact that the breed is less efficient in terms of production, it is considered to be impractical or unprofitable to rear them as broiler chickens? Such ethical dilemmas and production-related decisions constitute a very problematic development within the context of a modern animal husbandry that is under agro-industrial pressure to economise.

Box 7: Killing of Hatchlings

Across the globe, about 2.5 billion male, day-old chicks are killed per year, and amongst them are 48 million chicks in Germany.¹ Male chicks produced by specialised hybrid breeds of laying hens do not lay eggs and are not well suited to fattening, since they do not grow large breast muscle and the costs incurred for their feed are high. On account of the lack of their economic exploitability, male chicks are asphyxiated with carbon dioxide directly after hatching, or mechanically macerated.²

Subsequently, the dead chicks are most commonly used as deep frozen animal food in zoos, reptile shops or falconries. Their use as food is, on the one hand, accepted as being “reasonable grounds” by the regulating authorities, in accordance with the first article of the Animal Protection Act. On the other hand, the killing of healthy, male hatchlings for purely economic reasons is, from an ethical standpoint, highly controversial, according to the terms of the Animal Protection Act. Several federal states (Hesse, Lower Saxony, North Rhine-Westphalia) have passed, or planned to pass, bans on chick-shredding, on the grounds that the latter violates animal protection laws. However, these bans are, to a degree, legally contested.³

The fundamental problem has arisen through chicken farmers’ one-sided specialisation in either laying or fattening. Until the middle of the 20th century, so-called dual-purpose breeds were used, and they served as egg-laying, as well as fattening, hens. Since the 1950s, specialised laying or broiler breeds, respectively, were bred through hybridisation. The result was an extreme narrowing of breeding, and an increase of one-sided selection depending upon the fattening or laying qualities of the relevant breeds of hens. Often, the hens were genetically forced to conform to a kind of performance that went against their self-regulation mechanisms. For many breeds, free range husbandry is no longer possible, since the hens no longer possess the necessary range of behaviours and regulation needed in a changing environment.⁴

In addition, chicken farming has undergone an extreme monopolisation. Globally, just four companies now dominate the breeding market for laying hens, broiler chicks and other poultry. The German Erich Wesjohann Group were the source of the grandparents of about 70% of all white egg-laying hens across the world. The Dutch corporation Hendrix Genetics were the source of the grandparents of about 65% of all brown egg-laying hens.⁵

The Search for Alternatives to Chick-Killing⁶

- a) **Introduce gender selection before hatching:** For large, high-tech hatcheries, the possibility of determining a chick’s gender whilst it is inside the egg (through in ovo gender identification) is currently being tested. In the case of fertilised hens’ eggs, the eggs from which male chicks would develop are eliminated rather than hatched. These eggs can be used as feed. Two methods of gender identification have proven to be successful: an endocrinological method on the ninth day of incubation, as well as a spectroscopic method on the fourth day of incubation. The average incubation period is 21 days. As soon as one of these procedures proves to be practicable, there will no longer be any legal justification for the killing of male chicks, since an alternative will be available. The reason for the killing that has so far been deemed to be “reasonable”, will then cease to apply.⁷

In November 2018, the Federal Ministry of Food, Agriculture and Consumer Protection (Bundesministerium für Ernährung und Landwirtschaft; BMEL) made mention of the market-ready, patented system “SELEGGT”. The procedure entails the burning of a hole of 0.3 millimetres in diameter into the eggshell and extracting the so-called allantois fluid. The liquid is then examined to see whether or not it contains the gender-specific hormone estrone sulphate, which serves as a selection marker.⁸

The critique of the in ovo gender identification addresses, on the one hand, the accompanying, one-sided strengthening of very large hatcheries which, in the future, will be the only ones able to afford this kind of technology. On the other hand, it can also be seen that, in this process, the killing of male animals is merely shifted into the first third of the hatching process, and that it will be necessary to produce even greater numbers of eggs per successful hatching cycle.⁹

- b) **Further development of dual-purpose breeds through breeding:** In the medium term, the backbreeding of economically successful dual-purpose breeds will be attempted; ones that can be used for meat as well as for egg production. This is however, a medium, or even long-term, undertaking. Dual-purpose breeds are clearly less specialised, but should enhance certain qualities within the breeding process. In this way, dual-purpose hens could be bred that are layers as well as broilers.¹⁰
- c) **Rear male chicks (Bruderhähne):** Within the field of organic livestock breeding, there have been initiatives on farms for several years which fatten male chicks from laying hens for ethical reasons, despite the high cost of the feed and lengthy fattening periods (“Bruderhahn Initiative Deutschland”).

¹ Figures taken from: Windhorst, W. (2018): Wird die Tötung männlicher Küken von Legehhybriden schon bald nicht mehr notwendig sein? Wissenschafts- und Informationszentrum nachhaltige Geflügelwirtschaft (WING) Universität Vechta.

² BMEL (2018): Alternativen zum Töten männlicher Küken; https://www.bmel.de/DE/Tier/Tierwohl/_texte/Tierwohl-Forschung-In-Ovo.html.

³ Verbraucherzentrale (2018): Tötung von Eintagsküken. Diese Alternativen gibt es; <https://www.verbraucherzentrale.de/wissen/lebensmittel/lebensmittelproduktion/toetung-von-eintagskueken-diese-alternativen-gibt-es-11924>.

⁴ Der Kritische Agrarbericht 2014. Katharina Reuter: Vermeintlich wertlos. Alternativen zum millionenfachen Töten von Küken; https://www.kritischer-agrarbericht.de/fileadmin/Daten-KAB/KAB-2014/KAB2014_234_240_Reuter.pdf.

⁵ Susanne Gura (2015): Das Tierzucht-Monopoly – ein Update. Über die praktisch konkurrenzlose und weitgehend geheime Machtkonzentration auf dem Gebiet der Tierzucht. Kritischer Agrarbericht 2015; http://www.kritischer-agrarbericht.de/fileadmin/Daten-KAB/KAB-2015/KAB2015_227_231_Gura.pdf.

⁶ Aufwind für das Ökohuhn der Zukunft, Pressemitteilung Demeter e.V. 25.04.2018; <https://www.oekotierzucht.de/demeter-gegen-in-ovo/>.

⁷ S. footnote 2.

⁸ BMEL (2018): Pressemitteilung Nr. 171 vom 08.11.18. Durchbruch: Gemeinsam Kükentöten beenden! Die Bundesministerin für Ernährung und Landwirtschaft und SELEGGT stellen marktreife Methode zur Geschlechtsbestimmung im Brut-Ei vor; https://www.bmel.de/SharedDocs/Pressemitteilungen/2018/171-BMEL_Seleggt-Methode.html.

⁹ Demeter (2016): Geschlechtsbestimmung im Ei löst das Problem der sinnlosen Tötung von männlichen Küken nicht; <https://www.demeter.de/verbraucher/aktuell/geschlechtsbestimmung-im-ei-keine-loesung>.

¹⁰ S. footnote 4.

Following from the constitutional obligation towards animal protection and the ongoing debate within society, the Federal Ministry of Agriculture initiated an animal welfare initiative in 2014.⁷³ Meanwhile, clear guidelines for animal husbandry and improved criteria for livestock housing, which were developed amidst dialogue with veterinarians, have been established.

⁷³ Cf. https://www.bmel.de/DE/Tier/Tierwohl/tierwohl_node.html; and: <https://www.tierwohl-staerken.de/aktuelles/news-details/news/seit-15-jahren-steht-der-tierschutz-im-grundgesetz/>.

Shortly before this development, in Dresden, in 2013, during the convention of the German Farmers' Association (Deutscher Bauernverband, DBV), some guiding principles for animal husbandry (Leitbild Nutztierhaltung) were adopted. They include the following: *"We regard animals as a part of creation. We keep animals in order to produce food, we thereby earn our income and secure the livelihood of our families and farms. We know that the keeping of livestock always entails the responsibility of weighing up diverse requirements (e. g. animal welfare, environmental and climate protection, food safety, economic efficiency). We face up to this responsibility and feel obligated to ensure the protection of animals."*⁷⁴

These guiding principles need to be implemented in concrete and manageable commitments on the part of individual enterprises and there also needs to be a transfer of modified standards of animal welfare into the quality assurance and quality management certification systems.

Following a request from the Federal Ministry of Food and Agriculture, in March 2015, the Advisory Council on Agricultural Policy, Food and Consumer Protection (Wissenschaftlicher Beirat für Agrarpolitik, Ernährung und gesundheitlichen Verbraucherschutz; WBAE) published a comprehensive report entitled: *"Wege zu einer gesellschaftlich akzeptierten Nutztierhaltung"* (towards a form of livestock husbandry that is accepted by society).⁷⁵ This report makes mention of modified structures and methods within livestock husbandry, a different ethical awareness regarding livestock husbandry within society and diverse issues surrounding livestock husbandry. Also mentioned are explanations regarding the steering effects of the market, and state and civil society; as well as aspects regarding and recommendations for sustainable livestock husbandry.

The following guidelines are recommended in this report:

1. access for all farm animals to various climate zones, preferably the natural climate outdoors;
2. provision of different functional areas with various floor coverings;

74 Leitbild Nutztierhaltung. Deutscher Bauernverband 2013. See: <http://www.slb-dresden.de/dokumente/Leitbild-Nutztierhaltung.pdf>, p. 3.

75 http://www.bmel.de/SharedDocs/Downloads/Ministerium/Beiraete/Agrarpolitik/GutachtenNutztierhaltung.pdf?__blob=publicationFile.

3. provision of installations, substances and incentives to encourage species-specific activities, feed intake and grooming activities;
4. provision of sufficient space;
5. a halt to amputations,
6. routine farm self-inspections based on animal welfare indicators;
7. a clear reduction in the use of medicinal products;
8. improved levels of education, knowledge and motivation of people working in the livestock sector; and
9. greater consideration of functional characteristics in breeding.

However, in terms of the cost and the political enforceability of these new, consistent standards within livestock husbandry, the report states the following:

“The concrete implementation of the guidelines would lead to additional costs, estimated to be an increase of 13 to 23 % (which, altogether, amounts to about 3 to 5 billion Euros per year). Given that the value-added share of agriculture reflected in the consumer end price is around 25 %, if these additional costs were directly passed on to the consumer, they would lead to an increase in consumer prices of around 3 to 6 %. In terms of magnitude, this corresponds to the very amount that a large part of the population have declared that they are willing to pay. However, owing to a lack of plans and international market integration, this attitude has not currently been put into practice. On account of the competitive pressures within the milk and meat industry, which is clearly influenced by cost leadership, unless there are accompanying policy measures, a cost increase of this kind would lead to the relocation of some production to countries that have lower animal welfare standards. This would then thwart animal welfare goals.”

In this calculation of additional costs, the Advisory Council presumes the undertaking of a distinct asset redeployment within present agricultural funding; one which is in favour of the forms of animal husbandry that offer greater animal welfare. One thing becomes quite clear that it is not a lack of basic insight and scientific expertise which is preventing an understanding of the necessity to adopt and implement forms of animal husbandry that allow for greater animal welfare, or greater sustainability within the agricultural economy. Rather, what is lacking is the political intent, as well as binding political standards and accompanying measures which could offer opposition to the pressures of the international competitive situation and the influence of agribusiness. Moreover, within the context of Agenda 2030, there are too few guidelines for there to be a realignment of agricultural education and training within Germany, as well as an integrated concept of ecological sustainability.

2.7 A Vegetarian Diet as a Lifestyle: Differentiation of Nutritional Styles and the Increase of Consumer Awareness within Germany

A long time ago, a pluralisation of nutritional styles evolved within Germany, as well as elsewhere around the world: The peak of meat consumption seemed to have been reached, even surpassed, after 2010; then, the ritualised “routines of meat consumption” were publicly discussed in increasingly critical ways.⁷⁶ A study conducted in 2013 by the University of Hohenheim, in co-operation with Göttingen University, divided consumers into three camps:

- 75.1% can be classified as “*unconcerned meateaters*”;
- 9.5% of those surveyed are “*meateaters willing to reduce consumption*”;
- 11.6% of interviewees wish to *deliberately minimise meat consumption* (flexitarians); and
- 3.7% of respondents are *vegetarians*.

It was discovered that in sociological categories, lifestyle and nutritional styles of vegetarian or vegan diets are more likely to be adopted by those who are “female and young” as well as by “well-educated” people.⁷⁷ The number of people adopting a vegetarian diet is evidently increasing and markets are reacting with a re-ordering or supplementation of their products.⁷⁸ Meanwhile – at least in Germany – there are broad and intensive discussions amongst the general public and on the pages of popular newspapers regarding the cultural change of attitudes and nutritional styles, as well as about prejudice regarding the transition towards vegetarian or vegan forms of nutrition.⁷⁹

The motif that is most frequently used, and which has long since had an impact on people to change to a meat-free form of nutrition, is one which is ethical in nature and refers to animal welfare and the rights of animals. The philosophical-ethical motto: “Only eat what you kill yourself!” has won broader appeal with a much greater num-

76 Cf. “Tierethiker kritisieren Routine des Fleischkonsums”, in: https://www.landeskirche-hannovers.de/evlka-de/presse-und-medien/nachrichten/2018/02/2018_02_26_3.

77 <https://de.statista.com/infografik/10875/vegetarier-und-veganer-in-oesterreich-nach-soziodemografischen-merkmalen/>.

78 The philosophical-ethical motto “Only eat what you kill yourself!” has won appeal especially with many young people. Cf. i. a. <https://vebu.de/vegie-fakten/entwicklung-in-zahlen/anzahl-veganer-und-vegetarier-in-deutschland/>.

79 Cf. i. a. Bernd Ulrich: Wie es ist, Tiere nicht mehr zu benutzen, in: Zeit-Magazin, Number 32, 2. August 2018.

ber of people, especially those amongst the younger generation.⁸⁰ The second most frequent motif is one which advocates the health-related arguments over and against excessive meat consumption⁸¹: The new ethics of voluntarily restricting one's own, limitless consumption of animal products corresponds with an increase in lifestyle diseases such as gout, cardiovascular diseases, diabetes and intestinal cancer, and regards them as expressions and consequences of an unhelpful, or one-sided, diet that includes an excess amount of meat. Epidemiological and nutritional studies undertaken by Harvard Medical School point to the fact that a third of all early deaths could be avoided if people were to switch their diet to one which contains just a little meat; or even purely vegetarian fare.⁸² At the same time, the debate surrounding a resistance to antibiotics in the field of medicine, which is caused by modern forms of animal husbandry, amongst other factors, is influencing a new way of thinking about the limits of meat consumption: Wherever a large number of animals are fattened for mass meat consumption, the rearing process needs to be completed as quickly as possible. In some non-EU states, such as the USA, pharmaceutical resources are used as fattening agents. They often end up in water systems, via sewage and slurry, and carry with them the relevant negative consequences for health and the environment.⁸³

Box 8: Statistics on Vegans and Vegetarians in Germany

Due to the significant media presence of vegetarianism and veganism in public life, the proportion of the population who will never eat meat is often overestimated. In 2018, 0.96 million German-speaking people in Germany indicated that their diet was predominately vegan.¹

In 2018, about an additional 6.31 million people described themselves as vegetarians or as those who, for the most part, avoided meat in their diet. In 2014, a mere 5.31 million people considered themselves to be vegetarians.²

80 Cf. a review on Richard David Precht's book: *Tiere denken. Vom Recht der Tiere und den Grenzen des Menschen*; <http://www.faz.net/aktuell/feuilleton/buecher/rezensionen/sachbuch/richard-david-precht-veroeffentlich-buch-tiere-denken-14485452.html>.

81 Nick Fox and Katie Ward: *Health, ethics and environment: a qualitative study of vegetarian motivations*, 2008; <https://www.ncbi.nlm.nih.gov/pubmed/17980457>.

82 <https://www.telegraph.co.uk/science/2018/04/26/third-early-deaths-could-prevented-everyone-giving-meat-harvard/>.

83 Cf. Protestant Church in Germany: *Lent to us is this star, on which we live. The Agenda 2030 - a Challenge for Churches. A Discussion Paper* authored by the Advisory Commission of the EKD on Sustainable Development, EKD-Texts 130, Hanover 2018; http://sustainable-preaching.org/uploads/ekd_texte_130_en_2018.pdf.

Evangelische Kirche in Deutschland: *Geliehen ist der Stern, auf dem wir leben. Die Agenda 2030 als Herausforderung für die Kirchen. Ein Impulspapier der Kammer der EKD für nachhaltige Entwicklung*, EKD-Texts 130, Hanover 2018, p. 37 ff.; https://www.ekd.de/ekd_de/ds_doc/ekd_texte_130_2018.pdf.

In 2016, in a study entitled “Prevalence of Persons following a Vegetarian Diet in Germany” (Verbreitung der vegetarischen Ernährungsweise in Deutschland), conducted by the Robert-Koch-Institute (RKI), it was reported that 6.1% of women and 2.5% of men follow a vegetarian diet. Amongst young adults (18- to 29-years old), the levels are distinctly higher: 9.2% of women and 5.0% of men are vegetarians. Amongst those who have been through higher education, or who live in the city, or are athletes, vegetarianism is more widespread than it is amongst the average number of the population.³

In 1983, only around 0.6% of the population were vegetarians.⁴

¹ People in Germany who classify themselves as vegetarians or as people who, for the most part, abstain from animal products, between 2015 and 2018; <https://de.statista.com/statistik/daten/studie/445155/umfrage/umfrage-in-deutschland-zur-anzahl-der-veganer/>.

² Number of people in Germany who classify themselves as vegetarians or as people who, for the most part, abstain from consuming animal products, between 2014 to 2018 (in millions); <https://de.statista.com/statistik/daten/studie/173636/umfrage/lebensEinstellung-anzahl-vegetarier/>.

³ Robert Koch-Institut: Verbreitung der vegetarischen Ernährungsweise in Deutschland – Focus – JoHM 2/2016; https://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GBEDownloadsJ/JoHM_2016_02_ernaehrung1a.html.

⁴ Number of vegans and vegetarians in Germany; <https://vebu.de/veggie-fakten/entwicklung-in-zahlen/anzahl-veganer-und-vegetarier-in-deutschland/>.

Despite the many differences regarding the individual points of the discussion, nutritional styles such as vegetarianism, veganism or flexitarianism are based upon an ethics of self-limitation⁸⁴, as is suggested in the debate by slogans such as “less is more” or “choose to live better, not have more”. What they have in common, is their rejection of the logic related to production within an industrial society that is consistently geared towards continual growth. This change of attitude has a considerable effect with regard to agricultural animal husbandry and there are calls for manageable livestock units and modified production conditions. In terms of meat consumption, this involves putting into practice postulations such as “eat less meat” or “back to consuming meat, at most, two or three times a week” or even the challenge to abstain from meat consumption altogether. The change in attitudes on the part of a proportion of the meat consuming population is also visible in the emergence of new and alternative marketing sites selling more expensively produced meat from its region of origin, as well as in the demand to respect animal welfare, and the same relevant

⁸⁴ Wolfgang Huber: Selbstbegrenzung aus Freiheit. Über das ethische Grundproblem des technologischen Zeitalters, Ev. Theol 52, 1992, p. 128–145; Evangelische Kirche in Deutschland: Umkehr zum Leben. Nachhaltige Entwicklung im Zeichen des Klimawandels. Denkschrift des Rates der EKD, 2009, <https://www.ekd.de/klimawandel.htm>; p. 155–157; Hans Diefenbacher et al: Freiheit zur Begrenzung – Strategischer Rahmen für die Arbeit der EKD und ihrer Gliedkirchen im Bereich Nachhaltige Entwicklung, 2016, p. 11–13, https://www.ekd.de/ekd_de/ds_doc/Freiheit%20zur%20Begrenzung%202018%2001.pdf; cf. Evangelische Kirche in Deutschland: Geliehen ist der Stern, auf dem wir leben. Die Agenda 2030 als Herausforderung für die Kirchen. Ein Impulspapier der Kammer der EKD für nachhaltige Entwicklung, EKD-Texts 130, Hannover 2018, p. 31 ff.; https://www.ekd.de/ekd_de/ds_doc/ekd_texte_130_2018.pdf.

implications regarding breeding, housing and feeding on livestock farms. An ethics of self-limitation also leads to a (re)turn to the debate regarding the geographical arena necessary for meat production: Instead of the global production and utilisation contexts of modern animal breeding, feeding, housing, transport, slaughtering and marketing, alternatives which involve very limited and manageable process chains are being promoted. Therefore, regional marketing and value added initiatives are also advantageous for animal husbandry and these benefits include: regional cultivation of feeding crops, land-bound animal husbandry, the identification of stakeholders within agriculture, slaughter and butchery, as well as shorter animal transport.

Box 9: Transport of Live Animals

Regulation of Animal Transport in the EU: Within the EU, the transportation of livestock is regulated through the EU-Regulation on the Protection of Animals during Transport of 2005 (Regulation (EC) No. 1/2005). In Germany, the European guidelines are implemented through the more detailed Animal Protection Transport Ordinance (Tierschutztransportverordnung; TierSchTrV). Transportation for farm animals frequently proves to be a great strain. Amongst other things, the level of stress increases with the duration of the transport. A journey of more than 8 hours is classified as being a long-distance transport.

Animal transports to nations outside of the EU often take several days; and this has a huge negative impact on the well-being of the animals. In addition, animals transported under such conditions are affected by a lack of oxygen, heat, cold, a lack of space and exercise, thirst, hunger, fear, stress, a lack of bedding, etc. Animals that are ill or unfit for transportation are often ignored. Nevertheless, the EU, as well as Germany, do not stipulate absolute limitations of transport time, but allow numerous exceptions which make long-distance transports possible. For a long time, therefore, animal protection advocates have been calling for a limitation of live animal transports within Germany to a duration of no more than 4 hours; and for international transportation, a maximum of 8 hours (plus a maximum of 2 hours loading time). Long-distance transports of more than 8 hours should be categorically banned.

Lack of Enforcement: With regards to animal transports within Germany, and all the more so in other nations, there are serious deficiencies concerning the supervision and implementation of the relevant statutory provisions. In addition, the existing laws are decidedly inadequate: it is legal, for example, to transport fattening pigs of 100 kilograms for up to 24 hours, without a break, giving each pig just half a square metre of space, at temperatures from 0°C to 35°C. In addition, it is legal to transport fully mature cattle for up to 29 hours, at temperatures of up to 35°C, allocating just one and a half square metres of space to each animal.

Transportation into Non-European Countries: Sheep and cattle are transported by lorry and boat under agonising conditions. Numerous animals die of thirst and are beaten severely, loaded improperly and abused with electric prodders, etc. Injuries, fractures and deaths are often the consequences of such treatment. In addition, the procedures and conditions of many abattoirs outside Europe do not even remotely correspond to German animal protection standards.¹

Given that there have been decades of serious and continuous violations of animal protection regulations regarding live animal transports to countries outside Europe (in particular Turkey, the Middle East, North Africa), such kinds of exports need to be stopped completely and expediently. Existing agreements regarding live animal transports between Germany and specific third party countries should be quickly suspended.

Animal Transports to Third Party Countries – Figures: Currently, the EU-Commission assumes that about 170 million animal transports are conducted each year within the EU. These, predominately, are poultry transports. The number of long-distance transports equates to about 17 million animals. Despite severe violations of animal protection regulations, the number of live animal exports from the EU into third party countries has skyrocketed. In 2012, 250,000 live slaughter pigs were exported to countries outside the EU. In 2015, more than 430,000 pigs were moved. In 2012, about 300,000 beef cattle were exported from the EU to third party countries. In 2015, more than 810,000 live cattle were transported. In 2012, about 70,000 breeding cattle were exported from Germany, of which about half were taken outside the EU.

Animal Transports within Germany: In recent decades, a large number of small and regional slaughtering businesses were forced to close as a result of the competition to which they were exposed from a small number of large abattoirs. Regional monopolies of very few slaughtering businesses lead to an ever-increasing distance between the agricultural farms and the abattoirs. As well as the actual transport time, there may also be long herding, waiting and unloading times. However, small, regional slaughtering businesses, as well as mobile slaughtering enterprises are an important addition in the successful and independent marketing of e. g. eco-meat or meat reared in conditions that are particularly animal-friendly, as a niche product.²

¹ <https://www.zdf.de/dokumentation/37-grad/37-geheimsache-tiertransporte-100.html>.

² Cf. Wissenschaftlicher Beirat für Agrarpolitik beim Bundesministerium für Ernährung und Landwirtschaft (2015): Wege zu einer gesellschaftlich akzeptierten Nutztierhaltung; Deutscher Bundestag Drucksache 17/14718 17. Wahlperiode 06. 09. 2013, Antwort der Bundesregierung auf die Kleine Anfrage der Fraktion BÜNDNIS 90/DIE GRÜNEN – Drucksache 17/14592 – Entwicklung der Tiertransporte; Deutscher Bundestag, Wissenschaftliche Dienste (2016): Exporte von lebenden Nutztieren aus der EU in Nicht-EU-Länder. Sachstand, WD 5–3000–059/16.

2.8 Summary: Animal Welfare – Human Welfare – The Welfare of Creation; the Conflict of Objectives as well as the Dilemmas Which Surround Animal Welfare across the Globe

In this rapid review of the complex developments in relation to prosperity, dietary habits and meat consumption in Germany after World War II, it has already become clear that there is a constitutive and indissoluble connection between animal welfare, human welfare and the welfare of creation. However, the way in which this connection is implemented and shaped within production, consumption and trade priorities is dependent upon the guiding values within society, super-ordinate political and eco-

nomical interests and an ethical consensus regarding standards across the whole of society, which, in turn, is shaped and modified by the factors which impact historical, sociological and political structures.

The implications of the following situations are rather different:

- In a fundamental situation where there is a lack of supply management, as can occur in a post-war situation, there is a super-ordinate interest to rapidly supply large groups of the population with cheap meat, since it is regarded as a vital prosperity indicator and is highly valued – or even overvalued (1960s and 1970s).
- In a classic situation of diversification, where there is a quantitative, as well as a qualitative, progression of habits regarding consumption and use, as occurs within the context of an established and differentiated affluent society, there is a dominant interest in the supply of choice, prime meat and compact meat for the fast food industry (1980s and 1990s).
- Within the context of an increased awareness of the affiliation between human welfare and animal welfare, a relevant interest in society can be detected regarding the ethical standards involved in a more responsible way of consuming meat, taking into consideration such factors as health and development policy, as well as the ecological and medical criteria which apply to nutrition (1990s and the first decade after 2000).

Therefore, there is a real conflict of objectives, since the plentiful supply of cheap meat, the similarly plentiful supply of prime meat and the introduction of ecologically compatible and self-limiting nutritional styles are mutually exclusive and incompatible. In recent years, the ambivalence of modern agriculture has become obvious to many: On the one hand, agriculture and livestock production have, for many years, shown themselves to be capable of enhanced performance, even as an export sector in their own right, and thereby contributed to the economic strengthening of many rural regions in Germany. In the interest of the food industry as well as the consumers, the social expectations in society to be continually supplied with large quantities of low-priced animal-source foods, were met; which must be considered as being historically unique. On the other hand, the population has become increasingly aware of the ecological consequences and the global, development-related limitations of this agricultural model. The debate within society is now confronting agriculture with new, ecological challenges and animal welfare issues that go beyond the concept which was previously dominant. There are genuine conflicts between the goals of animal protection, ecological sustainability, economic viability, competitive capacities

and the satisfaction of strong demand. However, this conflict of goals should not be dissolved under the priority of profitability or decided with sole regard to economics, since the survival capability even of future generations and the ecological integrity of the planet as a whole are at stake.

This present-day scenario also shows that it is never a single group of people who carry the responsibility for making the decisions in favour of new, shared objectives, but that complex, political and ethical negotiation processes are involved in trying to resolve the above described conflicts of objectives. Therefore, the endeavour to achieve a comprehensive understanding with regard to prosperity and development requires that there be complete negotiation processes involving all stakeholders: the farmers, as much as the tradesmen and women; and politicians as much as consumers. In this process, the quantity and orientation of meat consumption should no longer be overrated as the sole parameter of prosperity, but must rather be set in relation to other prosperity indicators, which, within the context of their compatibility with creation, must also reflect the dimensions of animal welfare.

3. Regarding Human-Animal Relationships from a Global Perspective – The Correlation between World Food Security, Meat Consumption and Sustainability, within the Context of Planetary Boundaries

3.1 *Holy Cows and Edible Snakes* – Diverse Traditions amongst Human-Animal Relationships

Issues surrounding the human-animal relationship are profoundly cultural and, in part, they are determined by religion. As soon as we turn to the global context of our relationship with farm animals, the intercultural complexity of attitudes and dietary habits becomes obvious: For Hindus, cows are holy, since they supply humankind with all the vital necessities (“the five sacred gifts of the cow”). Hindus are therefore prohibited from slaughtering or eating cows. Rather, cows are to be treated with respect, as are many other animals, according to Hindu tradition: God lives in every creature and the soul of many a person may be born again in an animal. The concept of “Ahimsa” – i. e. the principle of not causing harm to other living beings, or non-violence – is central to Hinduism and has, for thousands of years, contributed to the spreading of vegetarianism in this religious tradition (especially in the South of India). Within Islam, cats have a special place; in Egypt, they are considered to be holy, and in Sufism, vegetarianism is believed to be the ideal way of life.⁸⁵ In China and Thailand, by way of contrast, snakes, dogs and rats are eaten, alongside many marine animals; in some Asian countries, deep-fried insects are consumed.⁸⁶ Thus, there are no universally accepted food taboos within the cultures of the world. Rather, nutritional styles and habits are passed on and shaped through culture and region.

⁸⁵ Cf. i.a. <https://www.animalfair.at/tierschutz-tierrechte/tiere-in-den-religionen-teil-2-hinduismus-und-islam/>.

⁸⁶ Cf. also i.a.: Marvin Harris: Wohlgeschmack und Widerwillen. Das Rätsel der Nahrungstabus, München 1990; National Geographic: Eat: The Story of Food. Wie Essen unser Leben beeinflusst (2 DVDs), 2015; Felix Escher, Claus Buddeberg: Essen und Trinken zwischen Ernährung, Kult und Kulturen, Züricher Hochschulforum, 2003.

In many cultures or religions, people apply food rituals or rules which always have certain distinctions: This tradition features the strongest in Jewish religious history – and subsequently, in the Christian and Muslim traditions. Amongst the best known and (in cultural history) the most significant dietary laws is the prohibition against consuming blood in the Torah: the Jewish law in the Old Testament.⁸⁷ According to this law, the living soul in the body is represented by the blood, which is why it should not be consumed, but poured out onto the earth during the slaughtering process. Animals for slaughter are to be slaughtered in the kosher way (s. Box 11 “Kosher Slaughter”). These rules show deep respect for all living creatures as distinguished by the division of “clean” and “unclean” foods. The old religious traditions of cultic restrictions, the regulation and selection of animals or animal species for slaughter and consumption, indicate that there is a deep understanding amongst humankind about the necessary limitation of our right to encroach upon the lives of animals. Such a traditional, religious implementation of values, which regulated and limited meat consumption in archaic times, is increasingly losing significance in the secularised societies of modernity, as well as in the different background conditions involved in industrialised meat production. Due to the consequences of the industrialisation and the automation of livestock farming and production, humankind’s archaic understanding of the limitation and regulations which apply to eating other living creatures has been diluted or even abandoned.

Box 10: Slaughter

In 2016, German slaughtering enterprises slaughtered 59.3 million pigs, 3.6 million cattle and 632 million hens. In Germany, slaughter is regulated by the Ordinance on the Protection of Animals at Slaughter (Tierschutz-Schlachtverordnung of 2012). A relevant, statutorily regulated, qualifying certificate grants permission to stun and kill animals. Official veterinarians monitor and spot-check slaughterhouses by examining the animals for slaughter, as well as their meat.

In Germany, effective stunning before bleeding is a legal requirement. Stunning is used to render the animal unconscious before death, such that it is insensible to any pain or distress, thereby protecting the animal from unnecessary pain and suffering.

Stunning methods depend upon the respective species: Large animals with strong skulls, such as cattle, are stunned using captive-bolt stunning devices. Pigs, sheep and poultry are stunned with electricity, leading to unconsciousness. In addition, pigs and hens are increasingly stunned with carbon dioxide gas. However, the animals frequently suffer from respiratory distress or fear of suffocation. For pigs, the use of the inert gas helium is less stressful, but it is also more expensive. Research focussing on this issue is currently being undertaken.

87 Frank Martin Brunn: Selbstbestimmt essen. Ethische Erwägungen aus theologischer Perspektive, in: Mitteilungen des Internationalen Arbeitskreises für Kulturforschung des Essens, 2013, No. 20.

After stunning, the animals are, most commonly, suspended from an overhead rail by their hind legs. Then follows the act of killing by dealing the animals a fatal stab with a knife that is thrust into their neck or thoracic region (“sticking”). The target is one of the large arteries so that rapid bleeding is the result of proper sticking. After killing, hogs are held in a scalding tank for dehairing by abrasion and singeing. The feathers of fattened chickens are removed by scalding.

Frequent Stunning Failure – a Grave Violation of the Animal Welfare Act: According to the Federal Government’s report of 2012, stunning failure occurs during the slaughter of around 70 million poultry, six million pigs, 350,000 bovines and 100,000 sheep in Germany, each year. About 9% of these animals were not properly stunned at slaughter. Pigs were, for instance, whilst alive, thrown into the scalding tank with hot water. In the case of cattle, a second bolt from the captive-bolt gun had to be used in order to penetrate their skull.

Slaughtering is Piece Work: At a slaughter performance of 750 pigs/h, per automatic stunning device, the butcher has about 5 seconds to complete the sticking process. In the case of devices which slaughter 80 cattle/h, the execution of the stunning process (including ejection from the trap), as well as the sticking, must be done within a maximum of 45 seconds. The high rates of stunning failure could be greatly reduced by limiting the pace of the slaughtering process, limiting the possibility of technical error through the use of an error indicator, better working conditions for the slaughterers and regular stunning controls, as well as recurring animal welfare audits.

Improvements are Possible – Political Intent is Required: Structural and technical improvements are needed in relation to the slaughtering facilities. First and foremost, however, the deficiencies apparent in the official veterinarians’ monitoring system should be eliminated and the direct managerial authority of the representatives for animal welfare and quality assurance be extended. In addition, great improvements regarding the knowledge level of the slaughterers should be made. Often, slaughterers come from Eastern Europe and work in the absolute low-wage sector. They frequently work overtime, unsalaried, and are hindered by a language barrier that is relatively high.

Sources: Deutscher Bundestag Drucksache 17/10021, 17. Wahlperiode 15.06.2012, Antwort der Bundesregierung auf die Kleine Anfrage der Fraktion BÜNDNIS 90/DIE GRÜNEN – Drucksache 17/9824 – Tierschutz bei der Tötung von Schlachttieren; Deutscher Bundestag Drucksache 18/12519, 18. Wahlperiode 29.05.2017, Antwort der Bundesregierung auf die Kleine Anfrage der Fraktion BÜNDNIS 90/DIE GRÜNEN – Drucksache 18/12228 – Tierschutz bei der Tötung von Nutztieren; Gutachten „Wege zu einer gesellschaftlich akzeptierten Nutztierhaltung“ 2015.

Box 11: Kosher or Halal Slaughter

When evaluating kosher or halal slaughter (the un-stunned slaughter of warm-blooded animals according to Jewish or Muslim rites), it is clear that this must be, indeed, a very complex and controversial question. Both religious freedom and animal welfare have constitutional status.

In 2007, a study came to the conclusion that it is constitutional for exceptional permission to be granted. In Germany, kosher and halal slaughter are permitted where there is a “compelling reason” according to the Animal Welfare Act; and this includes the compelling dietary rules of the Jewish and Muslim religious communities (i.a. the Muslim Feast of Sacrifice or the Jewish Passover Festival). In the spring of 2018, the Federal Government confirmed that religious freedom took priority in this matter. However, there were also contrary

positions of the Federal Administrative Court, according to which kosher and halal slaughter should not be allowed whilst a religion also allowed for a vegetarian diet. For Jews and Muslims, this is the case.

Kosher and halal slaughter are, in practice, only permitted under exceptional permission by the federal states, or even by the relevant veterinary authorities. Precise figures of the yearly number of animals slaughtered, according to the kosher or halal method, across Germany, are not available.

However, kosher and halal slaughter are still very controversial. The Federal Chamber of Veterinarians, as well as numerous animal welfare organisations point out, using academic surveys, that animals slaughtered without stunning undergo substantial fear, suffering and pain.

At times, the discussion focuses on alternatives, such as kosher and halal slaughter after short-term stunning using an electric shock, which lasts about 25 seconds. In the Jewish faith, as well as in Islam, reform-oriented groups debate such alternatives.

In May 2018, the European Court of Justice (Europäischer Gerichtshof; EuGH) decided that the legal restriction of kosher and halal slaughter to specific slaughterhouses did not violate the religious freedom that exists within Europe. In Belgium, Islamic associations and umbrella organisations that were founded by mosques began a lawsuit following a government decision in 2016 within the region of Flanders, to ban ritual slaughter without stunning in temporary slaughterhouses.

Sources: Wissenschaftliche Dienste des Deutschen Bundestages 2007: Schächten. Das verfassungsrechtliche Spannungsfeld zwischen Religionsfreiheit und Tierschutz. Ausarbeitung; <https://www.swr.de/swraktuell/EuGH-Urteil-zum-Schaechten-die-religioese-und-politische-Bedeutung,schaechten-eugh-urteil-100.html>.

3.2 Overnutrition – Undernutrition – Malnutrition: Discrepancies in the Average Meat Consumption between the North and the South

In the past five decades, global meat production has increased fourfold. In 1961, worldwide production amounted to 71 million tonnes of carcass weight. In 2017, the figure was 322 million tonnes. Beef production has doubled in the last 50 years, pork production has quadrupled and poultry production has increased tenfold.⁸⁸ Global milk production has also doubled (from 1962: 347 million tonnes to 2012: 754 million tonnes). These dramatic figures came into the public eye when a shift in terms of the global biomass of mammals came into focus. In a study published in 2018, the global biomass was calculated in the form of gigatonnes of carbon. Using this method of biomass cal-

⁸⁸ <https://de.statista.com/statistik/daten/studie/28782/umfrage/die-globale-fleischerzeugung-seit-1990/>.

culatation, it was seen that farm animals constituted 60% of the biomass of mammals worldwide, 36% was attributed to human beings, and a mere 4% was produced by wild animals. Amongst birds, wild fowl made up 30% of the biomass, whilst domesticated poultry contributed 70%.⁸⁹ What lies behind such staggering growth rates?

In the decades after the war, Western societies (Western Europe and North America) were convinced that the increase of animal-source foods and animal products (milk and dairy products) could be considered as definitive evidence for the improvements achieved in the economic living conditions of the population. As this attitude became virtually global during the first two decades of development following the 1960s, meat consumption became the universal indicator of prosperity.

Worldwide, a “Hunger for Meat” has risen sharply.⁹⁰ By the middle of the century, experts expect meat production to increase from 300 million to 480 million tonnes per year. This will have enormous effects on the wider environmental situation: The production of meat would then account for more than half of all greenhouse gas emissions worldwide.⁹¹ On every continent of the world – with the exception of Africa – in the last 20 years, meat consumption has increased significantly – most notably, in some of the developing and emerging nations; and this mainly due to a growth in buying power. The BRICS nations make up about 40% of the world’s population. Urbanisation, as well as its influence as a status symbol, promote meat consumption.⁹² At the beginning of the 19th century, the global average meat consumption per capita was about 10 kg per year and this increased, by 2013, to about 42 kg; and indeed, in the USA, it amounts to 118 kg/year.⁹³ Thus, substantial differences in the rates of consumption between urban centres and rural regions can be observed.⁹⁴ The question as to how global meat consumption, as well as food production, can be kept within planetary boundaries, is therefore discussed with an increasing intensity.⁹⁵

89 S. Yinon M. Bar-On, Rob Phillips and Ron Milo: The biomass distribution on Earth. PNAS June 19, 2018; <https://www.pnas.org/content/115/25/6506>.

90 <https://de.statista.com/infografik/2478/prognostizierter-fleischkonsum-in-kilogramm-pro-kopf-im-jahr-2023-und-aktuell/>.

91 https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Klimawandel_auf_dem_Teller.pdf; p. 21.

92 <https://www.weltagrabericht.de/themen-des-weltagraberichts/fleisch-und-futtermittel.html>.

93 Martin Schlatter: Ernährungsgewohnheiten und ihre Auswirkungen auf die Ernährungssicherung künftiger Generationen. *Journal für Generationengerechtigkeit – Ernährung im Zeichen von Generationengerechtigkeit und Nachhaltigkeit*, 2018, p. 17–23, here, p. 18.

94 For details, see trends e.g. in the different rates of meat consumption in both urban and rural regions, e.g. in South-East Asia: Bill Vorley: Food Consumption, Urbanisation and rural transformations in South East Asia, in: <http://pubs.iied.org/pdfs/17335IIED.pdf>.

95 Cf. Marco Springmann, Michael Clark and others: Options for keeping the food system within environmental limits, in: *Nature*, Volume 562, pages 519–525 (2018).

Box 12: Global Land Utilisation through Farm Animals

Worldwide, the most common use of agricultural production land is animal husbandry with its grazing on pasture land and the cultivation of field crops as livestock feed.

Grassland

Globally, there are 5.0 billion hectares of agricultural land. About two thirds of this is permanent grassland (3.55 billion ha).¹ Many grassland-areas which are at a disadvantage from a physiographic viewpoint, such as mountains, steppes, etc., are not suitable for cultivation, but have great ecological significance.² It is only through moderate grazing that these areas become utilisable for providing human nourishment. In such areas, the keeping of farm animals is essential for a stable supply of sustenance for the local population. At the same time, using a method of grazing that has been specifically adapted to the location contributes to the preservation of a biodiversity that is specific to the locality.

In the case of grassland, the nourishment of humankind faces no direct competition, since ruminants convert grass and other plant-life into valuable foods such as meat and milk products.³ According to the FAO, recent research shows that there is less competition between the plate and the trough than was previously anticipated. About 80 % of the animal feed used worldwide is not directly suitable for human consumption. For example, in order to produce one kilo of a ruminant's meat, 2.8 kg of feed that would be appropriate for human consumption, is used; in the case of monogastric animals, such as pigs, the figure amounts to 3.2 kg. A third of the global grain harvest and about 40 % of arable land is used for keeping animals. Livestock farming employs 2 billion hectares of grassland.

Sustainability deficits in relation to grassland are the result of overgrazing, the unsustainable use of water, slash-and-burn land clearance and desertification, etc. It is estimated that a third of global grassland is already heavily degraded. In developing and emerging nations, a vicious cycle of the over-exploitation of soils and the aggravation of poverty persists. In many parts of the world, climate change has had a severely negative effect upon the yield and yield stability of the pasture land.⁵ About 3.2 billion people are directly affected by soil degradation. Thus, annual costs amounting to a tenth of the global gross national product accrue through soil degradation and the associated loss of biodiversity and ecosystem services, whereas measures implemented to combat soil degradation pay off quickly from an economic point of view.⁶

In principle, resilient agro-ecological grazing systems are conceivable and possible. Grazing also offers an important ecosystem service, since grassland biotopes can emerge that are very valuable in terms of biodiversity. For these to develop however, grazing systems that are adapted to the region are needed; those that are able to preserve biodiversity. In addition, extensive grassland use can contribute to the rate at which groundwater is recharged. An improvement in the quality of grassland can be conducive to a reduction of soil erosion, as well as an increased carbon capture and storage through the building up of humus soil.

In some regions, sophisticated agroforestry systems combine grassland with tree populations to enhance the resilience of the grassland against extreme weather events. Nitrogen fixing leguminous trees can e.g. augment soil fertility. The trees can serve as additional sources of income, in the form of wood, animal feed or as an energy source etc. Grassland still has a great additional productivity potential, especially in developing and emerging nations. For instance, an improvement of grazing management, the introduction of new varieties and techniques, and a customised use of fertilisers etc., can prove to be helpful.⁷

Fodder Production

A mere 260 million hectares of all international arable farm land (1.44 billion ha) is used directly for food production. A billion hectares are allocated to forage production with the remaining acreage given to renewable primary products.⁸ About a third of global acreage has already been degraded. As has happened before, land use conversion is taking place on a large scale, for example for the growing of additional fodder such as soy. The last remaining natural ecosystems, such as rainforests, savannahs and fenlands are being converted into agricultural land. These are accompanied by a massive, irreversible loss of biodiversity. Enormous, climate-relevant emissions are the result of humus degradation. Often, the arable land which has developed in such a way can only be used successfully for agriculture for a few years before it becomes permanently and entirely infertile.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) describes, in a comprehensive study, that at present, even less than a quarter of the earth's surface area remains largely untouched by human influence. It predicts that, by 2050, this unaffected proportion will amount to less than 10% and that this land will be unsuitable for human use, e. g. mountains, deserts or polar regions.⁹

¹ UBA (2013): Globale Landflächen und Biomasse nachhaltig und ressourcenschonend nutzen; https://www.umweltbundesamt.de/sites/default/files/medien/479/publikationen/globale_landflaechen_und_biomasse_kurz_deutsch_bf.pdf.

² World Commission on Protected Areas (2010): World Grasslands and Biodiversity Patterns; https://www.iucn.org/sites/dev/files/content/documents/world_grasslands_and_biodiversity_patterns_nature_serve_2010.pdf.

³ FAO (2018): More Fuel for the Food/Feed Debate. New FAO Study indicates that livestock primarily consume foods that are unfit for human consumption and that meat production requires a lower quantity of cereals than has generally been reported; http://www.fao.org/ag/againfo/home/en/news_archive/2017_More_Fuel_for_the_Food_Feed.html.

⁴ FAO (2017): Anne Mottet et al.: Livestock: On our plates or eating at our table? A new analysis of the feed/food debate; <https://www.sciencedirect.com/science/article/abs/pii/S2211912416300013>.

⁵ FAO (2015): Status of World's Soil Resources. Chapter 4. Soils and Humans; <http://www.fao.org/3/a-bc593e.pdf>.

⁶ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (2018): Worsening Worldwide Land Degradation Now 'Critical', Undermining Well-Being of 3.2 Billion People; <https://www.ipbes.net/news/media-release-worsening-worldwide-land-degradation-now-'critical'-undermining-well-being-32>.

⁷ FAO (2018): Transforming the livestock sector through the Sustainable Development Goals; <http://www.fao.org/3/CA1201EN/ca1201en.pdf>.

⁸ S. Footnote 1.

⁹ S. Footnote 6.

Thus, high meat consumption is a decisive (albeit not the only) factor influencing the spread of a number of phenomena which indicate both overnutrition and malnutrition on a huge scale, leading to record levels: In 2014, more than 1.9 billion adults were overweight across the world, of whom 600 million were morbidly obese (adipose). This “global obesity epidemic” – in the words of the WHO – has also spread rapidly, and increasingly within poor countries. The cause is an energy-rich diet coupled with a lack of exercise. The worldwide rate of obese adults doubled between 1980 and 2014. Being overweight is now believed to be the most important factor causing diabetes, high blood pressure, strokes and certain types

of cancer.⁹⁶ Undernutrition, overnutrition and malnutrition are, together, responsible for most of the non-contagious diseases and impairments to health. To various degrees, they affect more than half the world's population and are, in many cases, accompanied by an alienation from food production and consumption, which then also facilitates overconsumption, as well as an undersupply of foodstuffs.⁹⁷ At a global level – and this applies as much to the industrial as it does to the developing nations – degenerative diseases are spreading quickly due to diets which one-sidedly favour the consumption of meat and fat or boundlessly increase the very same; and a chronic lack of exercise in modern professional life also plays a huge part. Forecasts and developments are truly alarming.⁹⁸

International teams of experts now consider a “nutrition transition” in combination with an agro-ecological transition to be possible, at a national, as well as at a global, level:⁹⁹ They deem it feasible to feed the 10 billion people who are likely to be living on the earth by 2050 in a healthy way, without destroying nature; – or framed, as it has been, in a provocative motto: “Eat only 43 grams of meat per day, save the world.”¹⁰⁰

3.3 Do you Intend to ban Meat Consumption? – The Exponential Increase in Global Meat Consumption as an Unbridled Continuation of the Model of Catch-up Development

For a long time, development aid agencies have been calling for a change: “Alongside all other essential efforts, the focus of the debate needs to remain upon the fact that a rapid and notable reduction of meat consumption, especially in the countries of the Global North, and some emerging nations with a high meat consumption, is imperative. Only in this way will we be able to successfully deal with the problem of resistance to antibiotics. At the same time, the debate should no longer be pursued at the expense of livestock farmers who are so caught up in the oligopolistic structures of meat production and breeding that, in many instances, they have only lim-

96 <https://www.weltagrarbericht.de/themen-des-weltagrarberichts/gesundheits.html>.

97 Cf. i.a. <http://edoc.rki.de/oa/articles/rec510t1FMfd2/PDF/23JuqX9byg62Q.pdf>.

98 Barry Michael Popkin: Global nutrition dynamics: the world is shifting rapidly towards a diet linked with non-communicable diseases, in: The American Journal of Clinical Nutrition, Volume 84, Issue 2, 1 August 2006, Pages 289–298; <https://academic.oup.com/ajcn/article/84/2/289/4649577>.

99 <https://www.thelancet.com/commissions/EAT>.

100 <http://www.spiegel.de/gesundheits/ernaehrung/gesunde-ernaehrung-43-gramm-fleisch-pro-tag-und-die-welt-ist-gerettet-a-1248387.html>.

ited freedom to make even basic decisions.”¹⁰¹ However, this is not an easy task to achieve at a global level. “Do you intend to ban meat consumption?” is a question which is asked by governments who believe the agrarian and agricultural economies in the countries of the South to be motors of prosperity development within society, or by those who have opened up to allow access to regional or global agribusiness. And yet, worldwide, the hunger for meat is increasing notably.¹⁰² Even in 2008, a study commissioned by the Scientific Advisory Board of the German Government on Global Environmental Issues (WBGU) concluded that:

“In many developing nations, a diet which is very high in carbohydrates involving plant-based foods (such as grain, roots, tubers, legumes), is gradually being replaced by a diet which is richer in fat and protein, involving more animal-source foods (such as meat, milk, milk products, eggs), as well as more sugar and vegetable oils; and this trend is spreading. According to forecasts, the proportion of animal-source foods, sugar and vegetable oils included in the overall calorie intake, will increase from 29 % today to 37 % in 2050.”¹⁰³

The as yet relatively undiminished strength of the model of catch-up development that is in operation in the countries of the Southern hemisphere implies that prosperity is further defined as involving high, or even rising, figures of meat consumption. The consumption of beef, pork and poultry is skyrocketing, in particular in the *developing nations* – causing great problems for society, health and the environment.¹⁰⁴ Thereby, the idea of intrinsically linking meat consumption with an industrialised, expansive growth model, is highly problematic, since it will, in the end, repeat, rather than avoid or correct, the basic principles of the “mal-development” which occurred within the industrialised modern times as they relate to natural resources and the human-animal relationship.

The Club of Rome clearly pointed out in 2007 that the model of a globalised catch-up development, which is oriented towards the lifestyle of industrial nations, can, under no circumstances, be transferred to all other nations. A very resource-intensive lifestyle was, in its time, developed within the historical context of an “empty world”.

¹⁰¹ Stig Tanzmann of Brot für die Welt: <https://info.brot-fuer-die-welt.de/blog/antibiotikaresistenz-globale-tierhaltung>.

¹⁰² <https://de.statista.com/infografik/2478/prognostizierter-fleischkonsum-in-kilogramm-pro-kopf-im-jahr-2023-und-aktuell/>.

¹⁰³ Karl von Koerber, Jürgen Kretschmer, Stefanie Prinz: Globale Ernährungsgewohnheiten und Trends, Berlin 2008, p. 3; <http://www.eaternity.org/assets/sci-pub/Koerber,%20Kretschmer,%20Prinz%20-%202008%20-%20Globale%20Ernaehrungsgewohnheiten%20und%20Trends-annotated.pdf>.

¹⁰⁴ Cf. Heinrich Böll Stiftung: Agrar-Atlas. Daten und Fakten zur EU-Landwirtschaft, 2019.

Within today's context of a "full world", the transgression of the planetary boundaries, the expansion of a civilisation of modernity, even into the last corners of this earth, and an as yet exponential growth of the world's population, these prosperity models are no longer viable.¹⁰⁵ Therefore, it "is not enough to refer to the diverse forms of pollution and the decline of the ecosystems as externalities. Rather, the passage of humanity into a full world also needs to change the attitudes, priorities and incentive systems of all civilisations on this small planet."¹⁰⁶

At the same time, recent research undertaken by earth system science, which focuses on global living conditions within the context of the Anthropocene,¹⁰⁷ has made it clear that, on this planet, there is a planetary breaking point regarding the use of resources and the transformation of structural living conditions, including meat consumption, which should not be exceeded if the survival of succeeding generations is to be secured.¹⁰⁸ If however, religious traditions no longer regulate the extent and limits of humankind's right to encroach upon the lives of animals, i. e. when conducting a ritual, who or what will impose such boundaries?

Our amplified knowledge regarding the planetary boundaries which limit humankind's rights to encroach upon nature, animal and plant life, as well as the guidance given by religious traditions and improved medical and nutritional insights, must work together in order to develop appropriate, ethical and ecologically responsible background conditions for an "economy of sufficiency" within the arena of meat consumption; and ones which are also capable of winning general approval within society.

105 The report shows that when an enormous use of resources as a result of human activity, transgresses certain thresholds or tipping points, there can be irreversible and abrupt environmental changes. In: Ernst Ulrich von Weizsäcker u. a.: *Wir sind dran. Club of Rome. Der große Bericht. Was wir ändern müssen, wenn wir bleiben wollen. Eine neue Aufklärung für eine volle Welt*, 2017, p. 44 ff. and 48 f.

106 Cf. *ibid.*, p. 36–37.

107 The term "Anthropocene" was first used in 2000 by the Dutch chemical scientist and atmospheric researcher Paul Crutzen as an innovative guiding concept to describe a new, geological era. It depicts a geo-chronologic epoch, in which humankind has become one of the most important factors of influence, not only because of their natural environment in general, but also on account of the biological, geological and the atmospheric background conditions and transformation processes on earth. Cf. on the wider debate i. a.: Brigitte Bertelmann, Klaus Heide (ed.): *Leben im Anthropozän. Christliche Perspektiven für eine Kultur der Nachhaltigkeit*, München 2018.

108 Cf. Wolfgang Lucht: *Verwüstung oder Sicherheit. Die Erde im Anthropozän*, in: Brigitte Bertelmann, Klaus Heide (ed.): *Leben im Anthropozän. Christliche Perspektiven für eine Kultur der Nachhaltigkeit*, München 2018, p. 39 ff. *Ibid.*, it reads: "In nine systematic dimensions of the earth, which characterise together and in mutual interaction the state of the earth as a system, the definition of the planetary boundaries identifies the maximum deviation of the relevant systemic factors from a state that is characteristic for the Holocene, while taking into account persistent variables and the precautionary principle." (p. 48) Cf. on the same topic also the EKD-Text: *Evangelische Kirche in Deutschland: Geliehen ist der Stern, auf dem wir leben. Die Agenda 2030 für nachhaltige Entwicklung und die Rolle der Kirchen. Impulspapier der Kammer für nachhaltige Entwicklung*, EKD-Texte 130, Hannover 2018, p. 17 ff.; https://www.ekd.de/ekd_de/ds_doc/ekd_texte_130_2018.pdf.

3.4 We Would Need at Least Three Planets – The Global Environmental Impact of Industrialised Livestock Farming

By now, the global ecological effects of the disproportionate meat industry have been intensively researched and represented worldwide. Five different, yet mutually inter-dependent, dimensions are relevant:

- a) *Use of the arable land:* About two thirds of global arable land area is used for the growing of fodder crops. Due to the substantial losses that occur during the final part of food processing, large quantities of foodstuffs do not reach the consumer. The conversion ratio from plant-based to animal-source calories varies; in an ideal case, it is between 2 : 1 for poultry, 3 : 1 for pigs, farmed fish, milk and eggs, and 7 : 1 for cattle.¹⁰⁹ According to a calculation by the UN Environment Programme, the calories which are lost during the conversion from plant-based to animal-source foodstuffs, could, in theory, feed 3.5 billion people. Whilst the land consumption caused by the processes of urbanisation and mobility development in modern societies is already a grave problem¹¹⁰, the excessive surface coverage through the industrialisation of globalised agricultural production, as well as, in particular, the fodder imports from countries of the Global South (virtual land import), has, in many respects, reached alarming proportions.¹¹¹
- b) *Water consumption in meat production:* About 30 % of the water utilised in global agriculture is used in animal husbandry. Thus, we “eat” vastly more water than we drink. The problems connected with a disproportionately high water consumption in meat production has become well known amongst many groups through the platform Water Footprint Network.¹¹² The question as to whether or not a “virtual water trade” can help solve the global problem of the water crisis is currently a topic under much discussion.¹¹³
- c) *Use of antibiotics:* Since 2001, the use of antibiotics in fodder has been banned by the EU’s Minister of Agriculture; however, the problem regarding the excessive use of medicines in livestock farming persists.¹¹⁴ Research points to the fact that

¹⁰⁹ The conversion ratio depends very much upon the respective production and husbandry systems. There is a difference between cattle or other ruminants that are predominately fattened on grassland (which is no competition for human alimentation) or those fed in a barn with maize and soy produced on agricultural land.

¹¹⁰ <http://www.bodenwelten.de/content/fl%C3%A4chenverbrauch-trends-und-entwicklungen>.

¹¹¹ https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/WWF_Fleischkonsum_web.pdf.

¹¹² Cf. <http://www.wasserfussabdruck.org/?page=files/home>.

¹¹³ <http://www.bpb.de/apuz/29700/virtueller-wasserhandel-zur-ueberwindung-der-wasserkrise?p=all>.

¹¹⁴ https://www.bmel.de/SharedDocs/Downloads/Tier/Tiergesundheit/Tierarzneimittel/Lagebild%20Antibiotikaersatz%20bei%20Tieren%20Juli%202018.pdf?__blob=publicationFile.

certain types of meat are still contaminated with antibiotic-resistant strains of bacteria.¹¹⁵ In this context, the Farmers' Association, i.a., points to an antibiotics-monitoring scheme which has been required by law since 2014.¹¹⁶

- d) *Slurry tourism and fodder imports*: The greater the number of livestock that is kept, the greater the level of animal excrement which accrues. In countries other than Germany, there are also locations where excess slurry, with its nitrate pollution, mars the quality of both ground and flowing waters, which leads to, at times, substantial problems that affect the drinking water supply.¹¹⁷ A large number of wells in agricultural regions are still displaying excessive nitrate pollution.¹¹⁸ With meat production in Germany getting out of control, fodder is imported in order to, amongst other things, export meat; and slurry containing nutrients, which, to a great extent, have been imported, needs to be transported to and spread onto the arable land in Germany. In some regions, this system is already stretched to its limits, since livestock farms are distributed very unevenly across the regions.¹¹⁹ "Meat Eats Land" was the title of a large-scale study undertaken by the World Wide Fund For Nature (WWF), which proved that the surface coverage needed for meat consumption in Europe has been, to some extent, outsourced to other continents such as South America. Between 2008 and 2010, the EU had, on average, "covered" more than 30 million hectares abroad. This is just about equivalent to the surface area of Hungary, Portugal, Denmark and the Netherlands put together¹²⁰ or, in Germany, equivalent to half a hectare per cow.

Box 13: Slurry

In the Netherlands, livestock farming which is not land-bound has become such a great environmental problem that the animal population has already had to be reduced. In 2017, the number of dairy cows was cut by 160,000 to about 1.6 million animals (a reduction of 9%). The purpose of doing so was to lower very high phosphate emissions from livestock manure, which violated EU environmental laws.¹ For a long time, Holland relied upon the export of slurry and manure to Germany: In 2012, this amounted to about 1.7 million tonnes.² This roughly corresponds to 60,000 Dutch lorries carrying slurry, chicken manure or dry chicken manure. The area required to utilise Dutch slurry amounts to about 200,000 ha of German arable land.

115 <https://www.bund.net/massentierhaltung/antibiotika/>.

116 https://www.bvl.bund.de/DE/05_Tierarzneimittel/03_Tierarzte/04_Therapiehaeufigkeit/Therapiehaeufigkeit_node.html.

117 <http://worldtimes-online.com/news/403-unkontrollierter-g%C3%BClle-tourismus-gef%C3%A4hrdet-trinkwasser.html>.

118 <http://www.fr.de/wirtschaft/eu-klage-der-guelle-wahnsinn-a-741773>.

119 <https://www.regenwald.org/petitionen/673/reform-der-eu-agrarpolitik-die-futtermittelimporte-von-gen-soja-muessen-verboden-werden>.

120 <http://www.wwf.de/themen-projekte/landwirtschaft/ernaehrung-konsum/fleisch/fleisch-frisst-land/>.

As a result of the revision of the German Fertilising Ordinance in 2017, it is to be expected that slurry transports within Germany will be expanded. It is estimated that, each year, approximately 130,000 lorry loads, containing 3.15 million tonnes of slurry and manure need to be transported from the centres of non-area-bound livestock farming in Lower Saxony to other federal states. Centres of intensive livestock farming include the rural districts of Vechta (3.64 LSU/ha), Cloppenburg (3.05 LSU/ha) and the district of Borken (LSU GVE/ha), as well as the County of Bentheim (2.55 LSU/ha).³

Alongside the serious nitrogen pollution, over-fertilisation involving animal phosphate also occurs. In the districts where there is a strong concentration of livestock, such as Cloppenburg, Vechta, Emsland and the County of Bentheim, the permissible excess of 20 kilograms of phosphate per hectare per year is exceeded. According to the new Fertiliser Ordinance, from 2023, only a maximum excess of 10 kg/ha/year will be permitted.⁴

Another important reason for the revision of the Fertiliser Ordinance are the infringement proceedings brought about against Germany by the EU Commission in 2016, as a result of the longstanding violation of the EU Nitrates Directive of 1991. In Germany, more than 27% of the groundwater bodies exceed the threshold value of 50 mg nitrate/litre in groundwater. In some regions with high livestock densities, or a large number of biogas plants, the nitrate pollution in the groundwater is rising. In future, German water management experts expect that the treatment of drinking water to remove nitrate and pesticides will incur additional costs of between 580 and 767 million Euros per year.⁵

Additionally, Germany is likely to fail to meet the objectives laid down in the EU Water Framework Directive of 1990. Essentially, all surface water is to be in a sound ecological and chemical state by 2027 at the latest. At the moment, in Lower Saxony for example, not a single lake, and only a mere 2% of flowing water, meets these goals.⁶

Further significant problems also arise through the exceptionally high ammonia emissions involved in intensive farming. Within the EU, the NEC Directive is in force.⁷ This directive requires that there be substantial reductions in ammonia emissions (by 29% in 2030, by comparison with 2005). As things stand, every year in Germany, the national maximum level of emissions are greatly exceeded.⁸

¹ <https://www.agrarheute.com/tier/rind/wegen-phosphatquote-niederlande-stockt-160000-milchkuehe-ab-537717>.

² <http://www.handelsblatt.com/unternehmen/handel-konsumgueter/guellehandel-guelle-als-internationales-wirtschaftsgut/10353500-3.html>.

³ LSU/ha: Livestock Standard Units per hectare; 1 LSU is equivalent to 500 kg of live animal slaughter weight, i. e. approximately the weight of a dairy cow, 10 sheep or 7 fattened pigs; according to the EU-Eco regulation, a maximum of 2 LSU/ha are permitted within organic farming.

⁴ Nährstoffbericht 2016/2017 Federal State of Lower Saxony.

⁵ <https://www.umweltbundesamt.de/presse/pressemitteilungen/zu-viel-duenger-trinkwasser-koennte-teurer-werden>.

⁶ S. Footnote 4.

⁷ Richtlinie 2001/81/EG des Europäischen Parlaments und des Rates vom 23. Oktober 2001 über nationale Emissionshöchstmengen für bestimmte Luftschadstoffe.

⁸ <https://www.umweltbundesamt.de/daten/luft/luftschadstoff-emissionen-in-deutschland/ammoniak-emissionen#textpart-3>.

e) *Nitrous oxide and methane emissions as sources of greenhouse gases:* Above all, in recent times, an awareness regarding the ecological consequences of high meat consumption has been raised and the implications for climate change policies

have been discussed: Modern livestock farming systems, with their international networks for fodder management, lead to substantial, climate-relevant emissions of carbon dioxide, methane and nitrous oxide. On the one hand, this affects fodder production, particularly in regard to maize and soy production, on account of the increase in intensive cultivation without sustainable crop rotation. Such single-crop farming requires a high management intensity which includes the use of fertilisers, herbicides and pesticides. Furthermore, such kinds of farming can also harm the soil eco-systems if they mar soil fertility and thus contribute to soil degradation and soil erosion. Livestock production contributes less than 1.5 % to the global economic output. However, it causes 18 % of global greenhouse gas emissions, which is more than the transport sector.¹²¹ According to the study “Climate Change on your Plate” by the WWF, nearly 70 % of the food-related climate gas emissions are caused by animal production. Methane and nitrous oxide emissions increased by 17 % between 1990 and 2005.¹²² This is, first and foremost, a consequence of the increasing meat consumption in many parts of the world.

The Heinrich Böll Foundation has financed a large-scale study which comes to the following conclusion: “JBS, Cargill and Tyson Foods – three of the world’s largest meat producing companies – have, single-handedly, caused more greenhouse gas emissions in 2017 than France, and nearly as much as the biggest oil companies in the world. However, whilst energy giants such as Exxon and Shell are criticised as being contributors to climate change and have come under fire, barely anyone is looking at the meat and milk giants.”¹²³ The recommendations of the study produced by the Böll Foundation, or even the more recent study of the Institute for Agriculture and Trade Policy (IATP),¹²⁴ suggest that this has to change if we are to avert an ecological disaster.

Many stakeholders from agricultural institutes and NGOs concur that the following conclusion needs to be drawn from these observations: “The emissions from industrial agriculture do not only cause local environmental destruction and social crises, but are, on a large scale, jointly responsible for climate change. The Paris climate goals can only be achieved through a global social and ecological agricultural turna-

121 Cf. also the Global Agricultural Report of 2014: <https://www.welttagarbericht.de/themen-des-welttagarberichts/fleisch-und-futtermittel.html>.

122 http://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Methan_und_Lachgas_-_Langfassung.pdf.

123 <https://www.boell.de/de/2018/01/11/die-fleischseite-des-klimawandels>.

124 GRAIN and the Institute for Agriculture and Trade Policy (IATP): Emissions Impossible: Wie Fleisch- und Milch-Giganten den Planeten aufheizen; https://www.iatp.org/sites/default/files/2018-09/Emissions%20impossible%20DE_f.pdf; cf. also: <https://www.sueddeutsche.de/wirtschaft/klimawandel-fleischkonzerne-co-emissionen-1.4058225>.

round.”¹²⁵ Globally, the extremely high rate at which animal-source foodstuffs are produced, connected with a notably greater use of water, land and energy, and this, for the most part, is related to producing fodder crops. The expenditure required for the production of a single animal-derived calorie is up to seven times as high as that of a plant-based calorie. Therefore, the more that the consumption of animal products, such as meat and dairy produce, increases across the globe, the more the ecological boundaries are transgressed. If a predicted world population of nine billion people should require the same consumption of animal produce in 2050 as the population in Europe do today, the limits relating to the availability of fodder, the use of slurry produced and the reduction of climate-relevant emissions would be reached very rapidly and we would then need at least three planets to sustain the trend. If the rate of meat consumption found in North America were globalised, we would even require five planets.¹²⁶

Box 14: Agriculture and Environmental Economics

The ecology-related criticism levelled at the commercially-driven economy deems that, at their core, the environmental issues are connected to the fact that economic players are not obliged to bear the cost of all of the damage that they cause. This is why economic players make cost-effectiveness decisions which harm third parties. Therefore, it must be the objective that such external costs are *internalised*, i. e. they are included in the calculations of the polluters and are thus reduced to an optimal level in economic terms.

The agricultural sector generates costs which are not met by the causative agents – the agricultural producers – and benefits, for which they are not remunerated. The negative effects upon environmental resources such as soil, air, water and biodiversity are counted amongst the external costs of agricultural production. External benefits are identified as being the maintenance of cultural landscapes and contributions towards regional development.

Agriculture contributes directly to Germany’s greenhouse gas emissions by about 7.4%. By itself, agriculture causes 81% of all nitrous oxide emissions and 58% of methane emissions. The digestive processes of farm animals and organic fertilisers contribute about 40%.¹

In addition, soils and water bodies suffer through nitrogen input (directly or via the air), of which at least 70% is caused by agriculture.² With regard to nitrogen pollution, the boundaries of the ecological carrying capacity are considered to be exceeded, making their reduction a pressing environmental problem.³ One of the consequences of nitrogen excess is the nitrogen pollution of the groundwater and, ultimately, drinking water, as well as the eutrophication of forests, fenlands and water bodies, and an acidification of soils and water

¹²⁵ Cf. <https://www.topagrar.com/news/Home-top-News-Umweltstiftung-kritisiert-Klimabilanz-der-Fleisch-und-Milchindustrie-8839203.html>; cf. also Bundesministerium für Ernährung und Landwirtschaft: Global Forum for Food and Agriculture. Communiqué 2018 “Die Zukunft der tierischen Erzeugung gestalten – nachhaltig, verantwortungsbewusst, leistungsfähig”; <https://www.gffa-berlin.de/>.

¹²⁶ <http://www.footprint.at/index.php?id=2824>.

bodies. The acidification damages biological diversity, which is also threatened by the use of pesticides and the destruction of biospheres, for instance, through land consolidation. At the same time, agriculture also offers habitats to species, for example through extensively used meadow orchards, arable land, vineyards, grassland, and structurally diverse elements within the landscape, such as hedges. Frequently, these activities go hand-in-hand with the cultivation and maintenance of cultural landscapes.

To a very large extent, livestock production contributes to agriculture's nitrogen emissions; for instance, it contributes about 70 % of the ammonia emitted. In addition, the nitrogen efficiency in meat production amounts to, on average, a mere 20%; i. e. only 20 % of the nitrogen used for production is ultimately contained within the meat, by comparison with plant products where the figure is, on average, 80%.⁴ In regions with a strong concentration of livestock – such as in Northwest Germany – the nitrogen balance surplus is particularly significant. This results in high eutrophication levels in surface waters, as well as a high level of nitrate pollution of the groundwater.⁵

The external costs of agriculture can only be monetised in part. Research into the pollution load caused by diverse contaminants, or otherwise with regard to other countries, suggests that the external costs of German agriculture amount to a minimum of 50 billion EUR, compared to a net product of a “mere” 20 billion EUR (approximately). Already the external costs of the nitrogen surplus which is predominately caused through agriculture and herein, largely through livestock production, is estimated to be up to 435 billion EUR (2008) per year, for the whole of the EU.⁶ A rough calculation for Germany assumes costs of about 20 billion EUR.⁷ The costs of halving the agricultural use of nitrogen are – if executed efficiently – believed to be far smaller than the benefits achieved. This means that a substantial emissions prevention would be economically viable.⁸

Environmental economic instruments for an internalisation of external effects include, amongst others, emissions charges and subventions to promote less damaging economic practices or even compensation for external benefits. Thus, the Advisory Council on the Environment (Sachverständigenrat für Umweltfragen; SRU) suggests that, in order to aid re-orientation, alongside regulatory policies as well as information and training programmes, surplus levies for nitrogen should be paid according to the nitrogen surplus produced by individual farms.⁹ At the same time, it calls for a considerably stronger ecologisation (greening) of the direct support schemes for farmers.¹⁰ The SRU and others believe that one of the positive results of an effective internationalisation of the nitrogen emissions in Germany will be a significant reduction in the intensity, as well as the spatial concentration, of livestock farming and livestock.

¹ Cf. UBA 2017, p. 440.

² Cf. UBA, SRU 2015, p. 169 f. and 180 ff.

³ Cf. SRU 2015, p. 34.

⁴ Cf. SRU 2015, p. 182 ff.

⁵ Cf. UBA 2018, Daten zur Umwelt, p. 64 and 76; cf. UBA 2018, FAQs about nitrate.

⁶ Cf. van Grinsven et al. 2013.

⁷ Cf. Gaugler/Michalke 2013.

⁸ Cf. Vermont/de Cara 2010, van Grinsven et al. 2013, SRU 2015, p. 251 ff., Sutton et al. 2011.

⁹ Cf. SRU 2015, p. 344 ff.

¹⁰ Cf. SRU 2015, p. 337 ff.

Sources: Umweltbundesamt (UBA): Land und Forstwirtschaft, <https://www.umweltbundesamt.de/daten/land-forstwirtschaft>); Umweltbundesamt (UBA 2017), Nationaler Inventarbericht zum Deutschen Treibhausgasinventar 1990–2015 Berichterstattung unter der Klimarahmenkonvention der Vereinten Nationen und Kyoto-Protokoll 2017, Nationaler Inventarbericht zum Deutschen Treibhausgasinventar 1990–2015, Dessau 2017; Umweltbundesamt (UBA 2018): Daten zur Umwelt, p. 64 and 76; https://www.umweltbundesamt.de/sites/default/files/medien/376/publikationen/uba_dzu2018_umwelt_und_landwirtschaft_web_bf_v7.pdf; Umweltbundesamt (UBA 2018): FAQs zu Nitrat im Grund- und Trinkwasser; https://www.umweltbundesamt.de/sites/default/files/medien/376/publikationen/uba_dzu2018_umwelt_und_landwirtschaft_web_bf_v7.pdf; Van Grinsven, H.J. et al. (2013): Costs and benefits of nitrogen for Europe and implications for mitigation. *Environmental Science and Technology* 47/8, p. 3571–3579.; Gaugler, T. and Michalke, A. 2013, in: *GAIA – Ecological Perspectives for Science and Society* 26(2), p. 156–157.; Sachverständigenrat für Umweltfragen (SRU 2015): *Stickstoff: Lösungsstrategien für ein drängendes Umweltproblem, Sondergutachten*, Berlin; Vermont, B./De Cara, P. (2010): *How costly is mitigation of non-CO2 greenhouse gas emissions from agriculture? A meta-analysis*, in: *Ecological Economics* 69/7, p. 1373–1386.; Sutton, M.A. et al. (ed.) (2011): *The European Nitrogen Assessment*, Cambridge.

3.5 In Other Countries, the Animals Suffer Even More!? – The Lack of Synchronisation and the Need for Greater Regulation with Regard to Standards and Legal Frameworks for Animal Welfare and the Quality of Nutrition

During many national agro-ecological discussions, one might hear the argument that it is impossible to change anything, and that the competitive conditions of the world agricultural trade impose too great a pressure. Indeed, parts of livestock production may migrate abroad if standards within Germany or the EU change and the conditions of production become more expensive. However, the reference to the international background conditions and the pressures of globalisation should not be used to avoid each country’s respective national responsibility. Therefore, the fact that, at the beginning of 2018, the global conference for Ministers of Agriculture (Global Forum for Food and Agriculture; GFFA), in Berlin, decided to envision a change in the shape of livestock production by 2030, is a small step in the right direction. “The agricultural sector needs to adjust to future changes: It needs to orient all its operating plans towards sustainability; otherwise it will be swept from the market”, were the clear words that the German Federal Agricultural Minister directed at the participants of the international agricultural forum. With production methods geared towards short-term monetary gain, which can cause damage to the society as a whole, for instance through the irresponsible use of antibiotics in ani-

mal husbandry leading to the development of multi-resistance, one cannot achieve long-term economic survival.¹²⁷

Box 15: Inadequate Animal Husbandry

Clinical indicators for substantial, animal welfare-relevant deficits and problems in animal husbandry include, alongside apathy, inactivity, high rates of illness and mortality, deteriorating performance and the development of injuries or disorders through inadequate care. The bodily damage, diseases and injuries to an animal caused by deficiencies in the technologies and housing systems used within animal husbandry, are identified (to use the German translation) as technopathies (German: **Technopathien**). Typical examples are claw damage, shoulder lesions or lameness in pigs.

Ethopathies are behavioural disorders or deviances which cause pain and damage to the individual animal itself or to its conspecifics through the keeping conditions. Ethopathies are considered to be indicators of considerable suffering. In pigs, tail biting is believed to be a typical example.

Stereotypies are invariable and repetitive sequences, or fragments, of movements which are not executed in a productive way. Typical examples which are to be found in breeding sows include: bar-biting, vacuum-chewing, tongue-rolling or nest-building behaviour despite the absence of substrate material. These stereotypies are an expression of frustration due to a lack of fibrous feed or material for enrichment activities. Frequent vacuum activities are an indicator of previously or currently inadequate livestock farming practices.¹ Behavioural stereotypies are frequently accompanied by pathological alterations in the animals' brains, and an increased mortality.²

The causes of technopathies and ethopathies are often multi-faceted. Alongside keeping conditions and the wrong kind, or lack of, environmental stimuli, some of the problems may be the consequences of breeding or genetic defects. Breeding effects have been found to be major causes of tail biting in fattening pigs, or feather picking in hens. In addition, animal diseases or parasites which damage the nervous system can contribute to behavioural disorders. In pigs, instable animal groups with frequent changeovers may greatly increase aggressive behaviour and hierarchical encounters, since the social stress is too high for the animals.

Keeping detailed meat-inspection results over a long period of time can provide well-founded information regarding long-term, inadequate animal husbandry. In addition, taking scientific measurements of the animals' stress levels can provide more valuable information (i.a. hormone measurements).³

In terms of livestock ethology, the manifestation of positive emotions on the side of the farm animals can, in turn, provide valid evidence of good keeping conditions and the animals' well-being. Such indicators of well-being are, for instance, markedly playful behaviour and purposeful exploratory behaviour.

For this to develop, a form of environmental enrichment which utilises and stimulates the cognitive capacities of the animals has, amongst other factors, proved to be important. Mentally active animals are more relaxed, have a more active immune system and a greater desire for exercise, etc. The observance of species-specific patterns of activity and repose are also positive.⁴

127 <https://www.topagrar.com/news/Home-top-News-Schmidt-Bedeutsamer-Meilenstein-fuer-eine-nachhaltige-und-leistungsaehige-Tierhaltung-8991088.html>.

In 2016, the Association for Technology and Structures in Agriculture (Kuratorium für Technik und Bauwesen in der Landwirtschaft e. V.; KTBL) developed comprehensive, scientifically-based best practice guidance to be used in the farms' self-monitoring processes, which list assessment indicators for the protection of cattle, pigs and poultry. They detail indicators derived from performance, physiology and farm animal ethology, amongst others. Since 2014, such self-monitoring processes have been required by law.⁵

¹ DLG (2016): DLG-Merkblatt 382. Das Tier im Blick – Zuchtsauen; https://www.dlg.org/fileadmin/downloads/junge-dlg/DLG-Merkblatt_382.pdf.

² Norbert Sachser (2018): Der Mensch im Tier. Warum Tiere uns im Denken, Fühlen und Verhalten oft so ähnlich sind.

³ EFSA Panel on Animal Health and Welfare (AHAW) (2014): Scientific Opinion concerning a Multifactorial approach on the use of animal and non-animal-based measures to assess the welfare of pigs; <https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2014.3702>.

⁴ Norbert Sachser (2018): Der Mensch im Tier. Warum Tiere uns im Denken, Fühlen und Verhalten oft so ähnlich sind.

⁵ KTBL (2016): Eigenkontrolle Tierwohl; <https://www.ktbl.de/inhalte/themen/tierhaltung/themen/tierwohl/>.

The debate about animal welfare, standards of quality management and the necessary regulatory frameworks reached the EU Parliament approximately 15 years ago – as a consequence of a number of scandals involving the import of substandard meat, as well as through the lobbying of animal protection organisations and environmental associations. Since 2007, there has been a strategy for the safeguarding of animal health (Animal Health Strategy 2007–2013, “Prevention is better than cure”)¹²⁸, yet an “EU Animal Health Law” has only been in place since 2016.¹²⁹ The central focus of these regulations however, is protection against communicable animal diseases and the medical safety of meat production, including regulations for the use of antibiotics. As yet, little attention has been given (nor legal, nor tax-related regulatory instruments) to the ecological and development-policy-related effects of the rapid increase in meat consumption within the EU. It was only at the beginning of 2017 that the remarkable study “Animal Welfare in the European Union”, commissioned by the EU Parliament, was published. It discusses the legal framework conditions for the legislation of animal protection, sustainability and quality assurance amongst the EU member states and, in particular, takes a critical look at the interactions between EU-countries and third party countries with regard to animal trade outside of the EU.¹³⁰ Likewise, since 2017, a preliminary, scientific study has been available which examines in greater detail the very different state of affairs and the difficulties in implementing the various approaches to animal protection legislation at a global

¹²⁸ https://ec.europa.eu/food/animals/health/strategy2007-2013_en.

¹²⁹ https://ec.europa.eu/food/animals/health/regulation_en.

¹³⁰ [http://www.europarl.europa.eu/RegData/etudes/STUD/2017/583114/IPOL_STU\(2017\)583114_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/583114/IPOL_STU(2017)583114_EN.pdf).

level.¹³¹ Referring to this study, the NGO “Global Animal Law” differentiates between 8 different categories of countries in terms of the establishment and binding nature of legislative regulations relating to animal protection legislation:

- Case 1:** Countries where no animal welfare legislation was found.
- Case 2:** Countries having basic national laws: anti-cruelty laws (or penal code provisions) and new legislation on animal welfare.
- Case 3:** Countries with a national civil code provision giving a new status to animals.
- Case 4:** Countries with a basic national law and a provincial civil code provision giving a new status to animals.
- Case 5:** Countries with a basic national law and a national civil code provision giving a new status to animals.
- Case 6:** Countries with a basic national law and a provincial or local constitutional principle.
- Case 7:** Countries with a basic national law and a national constitutional principle.
- Case 8:** Countries with a basic national law, a national civil code provision giving a new status to animals and a national constitutional principle.¹³²

It is remarkable that only three countries, i.e. Germany, Austria and Switzerland, have sophisticated animal protection legislation that is established constitutionally, as well as being set out elsewhere within the law and within the penal code,¹³³ where, at EU level, cases relating to such protective legislation have already been brought¹³⁴ (whilst in many countries outside Europe, the legal situation in this regard still looks extremely poor). This overview clearly shows the extent to which farmers and meat producing enterprises within the EU are under pressure through the global competition with businesses in countries which have far lower standards. It also becomes clear just how much still needs to be done, with regard to establishing global legal structures for the meat and food industry.¹³⁵ Issues which relate to ethics within human-animal relationships and an ecological ethics of responsibility as regards meat consumption, finally need to become a lobbying topic of international ecumenical associations such as Action of Churches Together (ACT Alliance), World Council of Churches (WCC), World Communion of Reformed Churches

131 Cf. Sabine Brels: *Le droit du bien-être animal dans le monde: Évolution Et Universalisation*; <http://www.editions-harmattan.fr/index.asp?navig=catalogue&obj=livre&no=52995&razSqlClone=1>.

132 In English: <https://www.globalanimallaw.org/database/national/index.html>.

133 <https://www.globalanimallaw.org/database/national/index.html>.

134 <https://www.globalanimallaw.org/database/europe.html>.

135 <http://www.farm-europe.eu/news/reflections-on-the-evolution-of-the-european-regulation-on-animal-welfare-state-of-the-art-and-potential-improvements/>.

(WCRC) or the Lutheran World Federation (LWF). In their co-operation with regard to core goals of Agenda 2030 for Sustainable Development (SDG Agenda), they can inspire the establishment of more binding statutory regulations at UN and FAO levels. On the other hand, greater attention should be given to the diverse regulatory instruments which might influence and control general provisions for agriculture, livestock breeding and the meat trade. The creation of legal structures surrounding animal protection legislation, as well as sufficient possibilities for control and sanctions, are merely one instrument. An additional instrument involves government incentives which promote production forms and facilities that are forward-looking or prepared to look for a new direction: Similar to the measures implemented EU-wide with regard to tobacco duty since 1993¹³⁶, similar to those discussed with regard to a sugar tax¹³⁷ and realised, for example, already in Great Britain¹³⁸, corresponding measures applied to the agrarian economy or the food retail sector could take the form of a meat duty and support changes in the dietary habits of the population in order to avert enormous and irresponsible, subsequent costs in healthcare. In recent times, the possibility of a meat duty has become a matter of controversial political discussion,¹³⁹ as well as a scientific debate.¹⁴⁰ However, a meat duty should not be implemented as an undifferentiated levy, nor in isolation, but only as part of a balanced and coherent package of measures: the goal of which must be to make genuine improvements in intensive farming and change consumer behaviour. Whilst a noticeable, general meat duty may bring about a certain reduction in meat consumption, it will primarily increase the cost pressure on meat producers and thus lead – unintentionally – to an expansion in the production of cheap meat. Thus, a meat levy that is differentiated according to the respective keeping conditions, seems more expedient. Careful consideration should also be given to one of the possible side-effects of an isolated meat duty, which is greater social inequality, since the wealthy could continue their meat consumption without any alteration, whilst the affect of a levy on the less affluent would be more significant. The debate surrounding this topic should therefore be continued intensively as well as objectively.¹⁴¹

Even the instrument of bonus payments for enterprises which maintain high standards with regard to animal protection, meat quality and biologically-responsi-

136 <https://www.bundesfinanzministerium.de/Content/DE/Glossaireintraege/T/tabaksteuer.html?view=renderHelp>.

137 <https://www.tagesschau.de/inland/zucker-105.html>.

138 Cf. <https://www.n-tv.de/wirtschaft/Britische-Zuckersteuer-wirkt-article20355841.html>.

139 <https://www.topagrar.com/news/Home-top-News-Gruene-und-SPD-prangern-Fleischkonsum-an-2740363.html>; cf. also: <https://www.openpetition.de/petition/argumente/steuerpolitik-fleischsteuer-wegen-kosten-fuer-lebensmittelkontrollen>.

140 Marco Springmann et al: Health-motivated taxes on red and processed meat: A modelling study on optimal tax levels and associated health impacts, in: Plos One, 6. November 2018; <https://doi.org/10.1371/journal.pone.0204139>.

141 Cf. also: <https://www.morgenpost.de/ratgeber/article208921367/Warum-hoehere-Steuern-auf-Fleisch-sinnvoll-sein-koennen.html>.

ble husbandry, would need to be reviewed in terms of their efficacy. However, it is a thought-provoking notion that the introduction of “meat tax” is, in many ways, at least within the international discourse¹⁴², regarded as being a rather relevant, indeed, even necessary, factor for the reversal of consumption habits and production methods worldwide.¹⁴³

Considerations should also include a re-structuring of Value Added Tax (VAT). If the reduced VAT rate of 7% applied exclusively to foodstuffs which were produced under verifiably sustainable conditions (in meat production, they must comply, for example, with animal welfare standards which are clearly defined and controlled), and the regular VAT rate of 19% was applied to all foods produced using non-sustainable methods, it could lead to changes in purchasing and consumption behaviours, as well as within animal husbandry, whilst, at the same time, excluding or minimising the negative effects of an undifferentiated meat duty, as described above. Even in 2011, the EU-Parliament called afresh for an alignment of VAT with sustainability criteria¹⁴⁴ – even beyond the remit of the food sector. In Germany, similar initiatives and statements have been and are being made i.a. by the Federal Environment Agency, the Advisory Council on the Environment, the Eco-Institute e. V., the dialogue forum Ecological-Social Market Economy (FÖS), the Albert Schweitzer Foundation and several fair trade organisations. Campact e. V. advocates a petition brought by Pastor Frithjof Rittberger from Tübingen, who, supported by numerous NGOs and institutes, calls for a VAT reform with several benefits including standing as “a permanent and effective instrument to achieve better animal protection and fair working conditions”.¹⁴⁵

At a global level, plans to reduce meat consumption have rarely been brought about by a government, until now. In 2016 however, predominately for reasons affecting healthcare policy, the Chinese government decided to lower the meat consumption of the Chinese population: Whilst in 1982, meat consumption amounted to 13 kg meat per capita per year, in 2016, it had already reached 63 kg. Now, the limit is to be lowered to 27 kg per capita per year.¹⁴⁶

142 Cf. i.a. <https://futurism.com/experts-should-tax-meateaters-same-way-tax-smokers/>.

143 <https://www.theguardian.com/environment/2017/dec/11/meat-tax-inevitable-to-beat-climate-and-health-crises-says-report>; cf. also: <http://www.fairr.org/news-item/investors-urge-global-food-companies-cut-reliance-animal-proteins/>.

144 <http://www.europarl.europa.eu/news/en/news/en/press-room/20111012IPR29115/meps-call-for-vat-reforms-to-target-fraud-and-help-small-firms-and-green-goods>.

145 <https://weact.campact.de/petitions/okologische-mehrwertsteuerreform-fur-eine-wende-bei-nahrung-verkehr-energie-und-produktherstellung>.

146 Meat consumption in China: The Terminator likes Tofu. <https://www.zeit.de/wissen/umwelt/2016-06/fleischkonsum-china-regulierung-regulierung?print>.

As yet, there is no global codex for issues relating to animal welfare, nor is there a ratio which has the capacity to be binding at UN level that could assess nutritional quality or rather, sustainability within the production of animal-source and plant-based food. National governments can issue certain import restrictions on cheap meat, genetically modified foodstuffs or meat from production facilities which use globalised fodder imports. However, the basic conditions of a global agricultural order have not changed and are, as yet, geared towards capitalism, giving priority and market power to agribusiness companies and thus disadvantaging the smaller, regional or farmer-owned agricultural companies.

Therefore, further international regulation as regards standards and legal regulation relating to issues of animal welfare and nutritional quality are still required, and need the help of civil society, including the churches, to demand such a change at EU- as well as at UN-level.

3.6 *Global Nutrition Transition: Decoupling Meat Consumption from Affluence? – The Issue of Meat Consumption as a Key for World Health and the Ecological Carrying Capacity of the Earth*

Chapter 2.3 explained the correspondence between the exponential increase in the demand for meat consumption in Germany and a certain understanding of prosperity, given the particular situation of post-war development within Western Europe. In chapter 2.7, it became clear that, for approximately two decades, it has been possible to observe signs of a transition in attitudes and culture both within Germany and, to varying degrees, in other nations. There is a greater awareness amongst consumers, a difference in nutritional styles, and a greater awareness of problems regarding the issues of animal protection. Changes in cultural attitudes, a diversification of the goods supplied, as well as a greater sensitivity towards matters of animal welfare, are now engaging with one another and leading to an ever-increasing number of producers, traders and consumers of meat products who are thinking about the new trends.

The cautious changes at a national level are met by an altered discourse at an international level, in terms of the development policy-related debate regarding the goals of the SDG-Agenda. Admittedly, these development and nutrition-related discussions are not well enough known within the public sphere, the agricultural sector and also within agricultural education and training in Germany.

In recent years, the conditions and consequences of the global nutrition transition have been discussed intensely.¹⁴⁷ The global transition of dietary habits is also referred to as the “Global Nutrition Transition”. Within scientific literature¹⁴⁸ that refers to studies focussing on the prevention of obesity (adiposity), three main stages are discerned:

Stage 1 is termed a “receding famine”. Here, undernutrition is the main problem and there is great physical strain upon the human population.

Stage 2 is characterised by an increased consumption of fat, sugar, protein and heavily processed foods, as well as degenerative illnesses. “In the course of urbanisation, economic growth and changes within society (relating to work, leisure time, food processing and mass media), the consumption of fat, sugar and processed foods (convenience-products, fast food and snacks) increases, as does the intake of animal-source foods, whilst the consumption of traditional staple foods and fibre recedes.”¹⁴⁹ At the same time, the physical activities involved in work, housework chores and leisure time decrease significantly.

Stage 3 involves a combination of behavioural changes and a transition regarding nutritional styles: The intake of fat needs to be reduced whilst the intake of fibre, vegetables, fruit and carbohydrates needs to be increased. At the same time, an exercise-depleted lifestyle needs to be transformed into an exercise-enriched and more active lifestyle. Such a change would even facilitate a decline in diet-related illnesses. However, many nations still find themselves at Stage 2. The FAO, therefore, expects a further 60% rise in global meat consumption by 2050, and this could have disastrous ecological consequences.¹⁵⁰

147 Frank Waskow, Regine Rehaag: Globaler Ernährungswandel zwischen Hunger und Übergewicht; http://publikationen.sozologie.de/index.php/kongressband_2014/article/view/159.

148 Barry Michael Popkin (Head of the Interdisciplinary Obesity Center at the University of North Carolina, Chapel Hill School of Public Health) presented the concept “Nutrition Transition” in 1993 for the first time, using the title “Nutritional Patterns und Transitions”; and has since developed it amidst the study of various nations (publications, www.cpc.unc.edu/projects/nutrans/popkin); cf. i.a. also: Barry Michael Popkin, Linda S. Adair and Shu Wen Ng: The Global Nutrition Transition: The Pandemic of Obesity in Developing Countries; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257829/>.

149 Frank Waskow, Regine Rehaag: Globaler Ernährungswandel zwischen Hunger und Übergewicht, p. 144 f.; www.springer.com/cda/content/document/cda_downloaddocument/w_30_5277.pdf.

150 Cf. also the important study conducted for the German Parliament on the changes in global dietary habits by the Office of Technology Assessment at the German Parliament (Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag; TAB) within the context of the following project “Welchen Beitrag kann die Forschung zur Lösung des Welternährungsproblems leisten?” https://www.katalyse.de/wp-content/uploads/2014/05/2010TAB_GutachtenWandelErnaehrungsgewohnheiten05_2014.pdf.

Thus, it is the central hypothesis of this EKD study that the issue of meat consumption has become a key issue in terms of the world health situation, as well as the ecological carrying capacity of the earth.¹⁵¹ It is only through a politically intended, culturally well-communicated, value-based and, therefore, even religiously motivated decoupling of the link between economic growth and an increase in meat consumption that we might succeed in our re-orientation, amidst the current, calamitous trends in the world food situation. Regarding the situation in Germany, a reduction in the average meat consumption of 60 kg/year to about 15 kg/year per person is considered to be a rather reasonable and feasible goal.¹⁵² The German Nutrition Society (Deutsche Gesellschaft für Ernährung) believes that a maximum of 20–30 kg meat consumption per capita per year is a nutritionally reasonable figure within the context of a healthy, mixed diet.¹⁵³

3.7 Summary: Animal Welfare – Human Welfare – The Welfare of Creation: The Conflict of Objectives and the Dilemmas Surrounding Animal Welfare in a Global Context

In summary, it is clear that the link between a growth in prosperity and high meat consumption has led to a health-related and ecological dead-end. Never before, within the history of humankind, have we had such an excessive meat consumption as we do today. However, the system of catch-up development, and even the globalisation of the “Western” model of industrialised agriculture and meat production, is pushing up against planetary boundaries. The objective to feed a rapidly growing world population, sufficiently and healthily, cannot be reached whilst the rates of meat consumption are exponentially high. In all probability, concepts such as the technological optimisation of existing forms of animal husbandry, or the technological substitution of animal-source meat through artificial “meat” products which are created in vitro, can only be a part of the solution.¹⁵⁴

151 The same hypothesis is advocated in a study by 37 international experts from 16 countries, discussing the following topic: “Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems”, in: <https://www.thelancet.com/commissions/EAT>.

152 Cf. <https://www.augsburger-allgemeine.de/panorama/Ethik-Experte-im-Interview-Wie-viel-Fleischkonsum-ist-vertretbar-id41421371.html>.

153 <https://www.dge.de/presse/pm/weniger-fleisch-auf-dem-teller-schont-das-klima/>.

154 Cf. i. a. <https://ngin-food.com/artikel/supermeat-in-vitro-fleisch-israel/>; <https://www.zdf.de/nachrichten/heute-sendungen/fleisch-aus-dem-reagenzglas-100.html>; <http://www.faz.net/aktuell/stil/essen-trinken/kuenstliches-fleisch-der-buerger-aus-der-petrischale-14030839.html>.

The World Agricultural Report assumes that “We need an agro-ecological evolution in agriculture, food production and consumption. Since its origins 10,000 years ago, agriculture has always adapted to its respective environmental conditions. It is only in the past 100 years that the accessibility and use of fossil energy sources allowed one part of the world’s population to replace existing practices, which involved careful interaction with nature, with the use of machinery and modern chemicals. Over the past 60 years, this has led to an unprecedented global transformation and exploitation of natural habitats, along with regional agricultural and food systems. Today, the consequences of this transformation have become a central problem of humanity.”¹⁵⁵

Thus, a profound cultural learning process and a change in values are required; changes which affect fundamental questions surrounding the animal-human relationship, as well as our relationship with nutrition and our own bodies. Therefore, a global and national transition, with an eye on the standards of animal husbandry and the quality criteria of meat production, is absolutely necessary not only from the perspective of animal ethics, but also for reasons relating to global ecological and development policy.

The current model involving high rates of meat production and consumption is not fit for the future and cannot be universalised, since, through the mechanisms of global fodder crop production and on account of the associated division of labour, the inflated rates of land use simply prove to be unjust towards other peoples and nations. Thus, the core of the agro-ecological transition consists not in the adaptation of present-day agriculture to regional or local environmental conditions, but, long-term, in an inevitable reduction of the extraction of resources from nature altogether. This requires a comprehensive, cultural change in terms of the values which direct our lifestyles and a sustainability of the forms and means of production and consumption. According to Uwe Schneidewind, “*two blockades* need to be broken on the path towards sustainable nutrition, a ‘*technological-economic blockade*’, which optimises the global nutritional system solely in line with one-dimensional productivity aspects ... and a ‘*cultural blockade*’, which promotes the global generalisation of non-sustainable lifestyles and thereby threatens the diversity of nutritional patterns, as well as their ecological sustainability”¹⁵⁶.

155 Cf. <https://www.weltagrarbericht.de/?id=2157>.

156 Uwe Schneidewind: Die Große Transformation, Frankfurt/Main 2018, p. 247f.

The extent of the cultural transition required with regards to human-animal relationships and meat production, is worldwide, and it is only together that churches, civil society, agriculture and governments can successfully advance. It is as profound and challenging as the re-learning process we have started with regard to the decarbonisation of our economic system and the transition towards a post-fossil fuel era. The Church is participating in these processes of cultural transformation and changing values, in line with its commission to contribute to the “renewal of the mind” (Rom 12:2).

Measures for globally sustainable livestock farming therefore need to consider and interconnect with very different spheres of action, in whatever levels of responsibility and with whichever stakeholders are involved. As a minimum, the following areas require consideration:

- the extent of an individual’s consumption of animal-source foodstuffs and the subsequent health effects,
- the extent of the entire production of animal-source foodstuffs (natural resources, economic impact, international trade),
- efficiency enhancement in the use of natural resources,
- resource conservation and improvement of the condition of natural resources,
- preservation of valuable natural areas and cultural landscapes,
- improvement of the social and economic living conditions of rural livestock farmers,
- strengthening of the resilience of rural communities,
- improvement of livestock husbandry systems,
- improvements in animal health, and
- conservation of old livestock breeds.

In line with the study published in 2015 by the Advisory Commission of the EKD on Sustainable Development “Give us this Day our daily Bread”, the following needs to be said: “Whilst political demands are necessary, the practising of a sustainable lifestyle is, from a church perspective, of equal importance. Also with regards to the world nutrition situation, those of us who live in the early industrialised countries need to undergo a cultural change, the beginnings of which, however, are not yet visible.”¹⁵⁷

157 Evangelische Kirche in Deutschland: Unser tägliches Brot gib uns heute. Neue Weichenstellung für Agrarentwicklung und Welternährung. Eine Studie der Kammer der EKD für nachhaltige Entwicklung, EKD-Texte 121, Hannover 2015, p. 166; https://www.ekd.de/ekd_texte_121.htm.

English: http://archiv.ekd.de/ekdtext121_agricultural_development_and_global_food_security.html.

4. Responsible Human-Animal Ethics in Diverse Fields of Action: The Reflective Contribution of the Churches towards a Paradigm Change

4.1 *The Discussion of Meat Consumption and Animal Ethics is not Superfluous in the Western World – Aspects of Global Animal Ethics within an Ecological and Development-Oriented Context*

It has become clear that, whilst the majority of recent contributions to the scientific, philosophical and ethical debate about animal ethics emanate from countries of the West – a global overview has not yet been observed by the authors of this study – the topics of meat consumption and animal ethics are not superfluous in the Western world, but rather the intention of such discussion is wider and has great political significance for the safeguarding of humankind's long-term survival. This is a central goal of Agenda 2030 and is anchored in Goal 12: "Sustainable consumption and production". Albeit that none of the targets refer directly to meat production and consumption (this would have been too controversial in the political arena), several targets clearly show a relationship to the topic of this study: Thus, target 12.3 specifies the following aim: "By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses." Also, the aim of target 12.1 is: "Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries."

At the same time, it has become obvious that all those involved in different spheres of action need to co-operate in order to develop perspectives for the nutrition or agrarian transition, which is believed to be necessary by many; and that the responsibility cannot be handed over solely to one single group such as the farmers. Here, the statement made in a study undertaken by the North Elbian Church, in 2005, remains true today: "It is inappropriate to make farmers, whose existence hangs in the balance in many ways, solely responsible for a problem which affects society as a whole. A society that demands, with regard to food production, 'more and more' and 'cheaper

and cheaper’, cannot turn its back on agriculture if it fulfils these expectations. With regard to the production of foodstuffs, no-one can avoid responsibility. This applies to the producers as much as it does to the consumers.¹⁵⁸

The same level of responsibility should be attributed to animal breeding, animal husbandry, the meat trade and to meat consumption. In the following subchapters, individual aspects of a comprehensive ethics of responsibility for human-animal relationships as they apply to different subsections an actors (consumer ethics, ethics of veterinary medicine and animal breeding, business ethics, agricultural professional ethics, political ethics and framework legislation) are to be explained by way of example.¹⁵⁹

Box 16: Marked Improvements in Animal Husbandry

Despite all criticism regarding current shortcomings in livestock husbandry, genuine appreciation of the improvements that have been achieved in recent decades should also be acknowledged.

Loose Housing for Dairy Cows Has Gained Acceptance

For example, today’s cool cubicle loose houses for dairy cows have substantial benefits for the animals compared to the classic tethered housing. In loose housing, the functional areas of eating, lying down and walking are separated. The lying down areas for rest and rumination are separated and covered with rubber mats or straw. In the eating area, there is sufficient space for every animal to eat, undisturbed, on its own. The cows are able to exercise in the walking area of the barn and in combined, paved runs. In this way, fresh air and sunlight are accessible to the dairy cows. They are milked in a milking parlour or via a milking robot. Brushes allow the cows to scrub their own backs and flanks.¹

About 70% of dairy cows are currently kept in such straw yards. Grazing is still the ideal environment for cows. Unfortunately, this has decreased substantially due to i.a. work and insurance-related reasons, as well as on account of limited pasture land. In 2010, 42% of German dairy cows were still going out to pasture for about five months of the year. In medium-sized farms, there was evidence that grazing occurred more frequently than it did in small or very large farms. Eco-farms aim to make grazing possible during the vegetation period.²

Outdoor-Climate Pigsties for Pigs are Increasingly Field-Tested

Highly modern, outdoor-climate pigsties facilitate a large degree of physical exercise, stimuli from outdoor climate, exposure to less noise and contain resting and lying areas with bedding. Not only is the climate in the pigsties far better than in the oftentimes dark, damp and stuffy pigsties of previous generations. Due to the separation of functions such as lying down, eating, mucking out and exercise, the intelligent pigs can follow their species-

158 Evangelisch-Lutherische Kirche in Norddeutschland: Zum verantwortlichen Umgang mit Tieren. Auf dem Weg zu einem Ethos der Mitgeschöpflichkeit. Stellungnahme der Kirchenleitung der Nordelbischen Evangelisch-Lutherischen Kirche, 2005; <http://www.kda-nordelbien.de/index.php/tierethik/206-ethos-der-mitgeschoepflichkeit.html>.

159 Cf. Leonie Bossert: Tierhaltung adé. Tierrechtsethik und Landwirtschaft, in: politische ökologie 154: Zukunftsauglich: Stellschrauben für eine echte Agrarwende, 2018, p. 42–47.

specific need for cleanliness, activities, play and a social life. In monotonous pens with fully slatted flooring, this can only be made possible to a very limited extent, which, in turn, gives rise to boredom, stress and aggressions in the pigs.³

Stress Reduction through Promoting the Animals' Cognitive Capacities

The extent of pigs' intelligence is shown in the following example. For many years, the Leibniz-Institute for Farm Animal Biology has revealed how "call feeding" can work with sows, in order to avoid stress and fighting at the feeding trough. Sows are equipped with ear mark transponders and learn to respond to their names within two or three weeks. Whenever their name is called out via a loudspeaker, they run to the automated feeding station to pick up their individual feed ration. Sows whose names are not called out remain entirely relaxed. The system is already applicable for large groups of up to 60 pregnant sows.⁴

From the Unenriched Chicken Cage to Cage-Free Housing with a Partially-Covered Run

In relation to laying hens, the EU-wide ban on unenriched cages led, in 2012, to a positive change in keeping conditions. In Germany, 61 % of the eggs available to private consumers come from free-run barns, 24 % are free range and 9 % come from organic production. In organic farming and marketing, free range conditions are stringently required. After a phase-out period, by 2028 at the latest, even conventional farming is to put an end to keeping hens in small groups in enriched cages.⁵

¹ Bundeszentrum für Ernährung (2018): Milch: Milchkuh-Haltung: Wie leben Milchkühe?; <https://www.bzfe.de/inhalt/milch-milchkuh-haltung-6966.html>.

² BMEL (2018): Milchviehhaltung in Deutschland; <https://www.praxis-agrar.de/tier/rinder/milchviehhaltung-in-deutschland/>.

³ KTBL (2008): Außenklimaställe für Schweine; https://www.ktbl.de/fileadmin/user_upload/artikel/Tierhaltung/Schwein/Allgemein/Aussenklimastall-allgemein/Aussenklimastall_allgemein.pdf.

⁴ Leibniz-Institut für Nutztierbiologie (2015): Die nächste Sau bitte! - Individualisierte Aufruffütterung soll Stress im Stall vermeiden und das Wohlbefinden erhöhen; https://www.fbn-dummerstorf.de/aktuelles/presse/presse/?tx_news_pi1%5Bnews%5D=112&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Baction%5D=detail&cHash=ff63e44e9b4fde8f2948dbde931df984.

⁵ BMEL (2018): Fragen und Antworten zur Legehennenhaltung in Deutschland; https://www.bmel.de/DE/Tier/Nutztierhaltung/_texte/HaltungLegehennen-Bioeier_FAQ_Tierschutz.html.

4.2 Less Meat – More Health: Aspects Pertaining to Consumer Ethics for Responsible Human-Animal Relationships

In 2013, a calculation concluded that, on average, in the course of his or her life-time, every German will eat 1,094 animals, amongst which 4 are cattle, 4 are sheep, 12 are geese, 37 are ducks, 46 are pigs, 46 are turkeys and 945 are hens.¹⁶⁰ Therefore, with

¹⁶⁰ <https://www.derwesten.de/panorama/deutsche-essen-in-ihrem-leben-durchschnittlich-1094-tiere-id7469059.html>; https://www.focus.de/gesundheit/ernaehrung/news/fleischkonsum-deutsche-essen-im-leben-mehr-als-1000-tiere_aid_670193.html.

regard to individual ethics of responsible consumption, the question as to what constitutes the right measure is being discussed for good reason, and in many respects. It is important however, to warn against a reductionist and exclusively quantitative approach or strategy. Debates about this topic often feature simplifying and emotion-alising distortions – which is understandable, since the topic truly affects one’s body and stomach, and “gets under your skin”. And yet, responsible consumer ethics cannot simply be reduced to the question: “How much meat can one legitimately eat?”. The questions: “Where does the meat come from?” and “How were the animals kept and fed?” must also be asked with equal legitimacy. Today, consumer ethics implies that consumers deliberately inform themselves about how the animals were kept, slaughtered and transported, whether they received medical attention and how they were bred. Whilst this background story has been somewhat opaque or pushed a-side, with the plight of the animals played out in closed, large-scale facilities or in outsourced slaughterhouses, it has, since the beginning of the century, shifted right back into the focus of society and public discourse. In many respects, the development of consumer ethics is only in its infancy and will only be actively perceived in few social groups. In 2015, the working party “Coherence” of the Joint Conference Church and Development (GKKE) thoroughly investigated the questions surrounding ethically responsible consumption and the establishment of standards for food production in general, as well as exploring options for private and public food regulation.¹⁶¹

Box 17: Alternatives to Meat from Livestock Production

Game Meat from the Country Shop

An alternative to sourcing meat from livestock production, that is seldom noticed, is eating wild game from a country or forest shop. Deer, wild boar, hare, fallow deer or red deer are wild animals, running free, which are killed through species-appropriate hunting. Wild game meat processing is undertaken by veterinary inspection offices according to EU-hygiene regulations. Since wild animals are perpetually moving about, with complete freedom, and select their food themselves, game meat is often low in fat and rich in nutrients and flavour. As well as furred and hoofed game, winged game such as wild geese, wild ducks and wild pigeons are also edible. The life cycle assessment of game meat is very good. It is produced within the region and is environmentally friendly. Hunting serves to regulate the numbers of wild animals and is thus also a natural way to rejuvenate trees in many woods.¹

Insects as an Alternative to Meat

In many parts of the world (Africa, Asia, Latin America, Australia), the consumption of edible insects (entomophagy) as a staple food is wide-spread. Worldwide, about two billion people eat insects and there are more than 1900 edible species.²

¹⁶¹ GKKE: Plädoyer für gerechte und nachhaltige globale Lebensmittelstandards. Fachgruppe Kohärenz der GKKE, Berlin Juni 2015; http://www3.gkke.org/fileadmin/files/downloads-allgemein/Lebensmittelstandards_01.pdf.

The FAO internationally promotes the breeding of insects in insect farms, as well as advocating their consumption as a remedy for malnutrition in tropical and subtropical regions (“edible insects”). Edible insects can be bred with little technological effort and space, and, most commonly, have a short life cycle of merely a few weeks.³

In Europe, many people harbour an ingrained aversion to insects as food. Due to the culturally deeply-rooted disgust, the predictions for a rapid increase in the acceptance and expansion of insect consumption within Europe, are rather cautious. Up until now, every seventh German has tried eating insects.⁴

In the EU, edible insects come under the EU-Regulation on Novel Food (Novel-Food-Regulation (EU) 2015/2283). All foods containing insects must be evaluated and approved by the European Food Safety Authority before they are put on the market. In addition, there is the possibility to admit some foods containing insects as “traditional foods” in the EU, if the insect food products have been consumed in third party countries for a minimum of 25 years and, within that time, they have not incurred any safety concerns.⁵

The health benefits gained through the consumption of insects are generally identified as being: their high protein and micronutrients content, as well as their low fat content. However, with regard to the protein supply, one needs to remember that, in some tests, the insects’ chitin was erroneously included in the protein measurements. Furthermore, chitin is indigestible. In addition, valid scientific data regarding the other nutrient elements found in insects are not available. Health risks include the possibility of having allergies to edible insects. Insects and crustaceans often contain similar proteins. People suffering from allergies to prawns or house dust mites could therefore potentially manifest cross-reacting allergies to insects. Moreover, entirely new insect-allergies could develop. Further potential health hazards include hygiene problems occurring if one is breeding insects on an industrial scale. In insect farms, many millions of insects are kept in the smallest of spaces. As yet, little is known about an associated use of medicines.

The consumption of insects can also transmit germs. In order for the insects to have an empty bowel before they are killed, they are not fed for the last 24 hours before they are killed. Insects bred for food production in industrial nations are killed by deep-freezing, washing and blanching (heated to a minimum of 85 degrees to kill off potential pathogens). As a general rule, insects should not be consumed unheated.

Moreover, the feed for insect farms needs to be of good quality. Scraps are not sufficient; rather, high-quality and hygienically unobjectionably fodder is required. Therefore, critics point out that it would be better for plants of premium quality to be directly consumed. Eating more pulses more frequently could, e. g., contribute to achieving a good protein supply in Germany.

However, the advocates of insect consumption as an alternative to meat-eating emphasise the ecological arguments, in particular. By comparison with meat from livestock, the production of insect products causes fewer greenhouse gas emissions per kilogram. Being cold-blooded animals, insects require less energy than classic farm animals. The feed conversion ratio of insects is thus far more efficient than that of chickens and pigs, etc., and they require less water.⁶

Up until now, very little is known about whether insects are sentient beings; able to feel pain and therefore capable of suffering. Bees are known to possess very high cognitive abilities (memory, learning and perception performance). From the perspective of animal protection, the species-appropriate keeping of insects is clearly less problem-laden than

the keeping of mammals. Sizeable breeding farms for insects currently exist in the Netherlands, France, Canada and Thailand. Up until now, insect meal is banned for use as fodder for livestock within the EU. However, the EU-Commission is currently reviewing the approval of fly maggots as animal feed.

Meat from Cell Cultures – “Clean Meat”

Amongst some of the future alternatives to meat from livestock that is being discussed is cultured meat or in vitro meat, which is grown from animal muscle stem cells, taken from bovines, pigs or poultry and placed in bio-reactors. Presently, diverse start-up companies – i. a. in Silicon Valley – are researching the development of synthetic meat. First of all, ultra-processed food products such as hamburgers, nuggets, etc., are to be brought onto the market. It is not yet possible to generate highly-structured meat such as steak. Expectations are that the market penetration of cultured meat will depend on the quality of its taste and the familiarity of its texture, as well as its price. Proponents of the “in vitro-meat” argue that using this method, a great deal of suffering of animals in livestock husbandry could be avoided and the life cycle assessment would be better. It is, as yet, unclear as to when the first synthetically produced meat will be brought onto the markets. Within the EU, it would be considered to be a novel food and would have to undergo the relevant approval procedure.⁷

¹ Bundeszentrum für Ernährung: Wild: Fleisch von frei lebenden Tieren; <https://www.bzfe.de/inhalt/wild-31841.html>.

² Bundeszentrum für Ernährung: (K)eine alltägliche Kost; <https://www.bzfe.de/inhalt/insekten-558.html>.

³ FAO (2010): Edible Forest Insects. Humans Bite Back! <http://www.fao.org/docrep/012/i1380e/i1380e00.pdf>.

⁴ Bundesinstitut für Risikobewertung (2016): Sind essbare Insekten als Lebensmittel aus Sicht der Verbraucher sicher? <https://mobil.bfr.bund.de/cm/343/sind-essbare-insekten-als-lebensmittel-aus-sicht-der-verbraucher-sicher.pdf>.

⁵ Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (2018): Fallen Insekten und daraus hergestellte Lebensmittel unter die Novel-Food-Verordnung? https://www.bvl.bund.de/DE/01_Lebensmittel/04_Antragsteller-Unternehmen/13_FAQs/FAQ_NovelFood/FAQ_NovelFood_node.html.

⁶ Verbraucherzentrale Hamburg (2018): Ernährungstrends. Insekten essen? <https://www.vzvh.de/themen/lebensmittel-ernaehrung/ernaehrungstrends/insekten-essen>.

⁷ Maastricht University (2018): Cultured meat. Frequently asked questions. https://culturedbeef.org/sites/intranet.mumc.maastrichtuniversity.nl/files/culturedbeef_mumc_maastrichtuniversity_nl/frequently_asked_questions.pdf.

The trend towards factory farming and the production of discounted goods, which is currently dominant and makes meat cheaper than ever before, is also a consequence of the mass demand for meat. From the perspective of consumer ethics, this would mean that, in the medium term, once there is less demand for cheap meat, less meat would be produced. Conversely, it would be true that were more meat to be purchased from companies which emphasise animal welfare, more of this kind of meat would be produced. In addition, it would be incompatible with consumer ethics to buy only choice pieces of meat and to export or utilise other parts of an animal for inferior purposes, although they are perfectly edible.

- By way of an alternative, one can buy meat from species-appropriate forms of animal husbandry which are already on offer in discount supermarkets. “Species-appropriate is a form of animal husbandry which considers the variety of ge-

netically-determined behaviours of a species” and their “species-specific requirements for their living environment, nutrition, exercise, social contact, activity and well-being”¹⁶².

- One can purchase meat products produced through organic farming, which are either protected through the EU organic logo (stars in the shape of a leaf against a green background), or through the national organic seal (hexagon), and checked by specifically authorised inspection and certification bodies for organic products.
- One can buy meat from conventional farms with a particular focus on animal welfare, such as the companies participating in “Neuland”, a brand programme for high-quality meat.
- One can purchase meat products that have been produced regionally and, preferably, from producer co-operatives located in the immediate vicinity, thereby reducing agonising transport times for the animals.
- In hotels or restaurants, one should always ask about the origin of the meat, in order to increase the critical consumer awareness and also ascertain more about the provider. One should always be careful with imported poultry products, for example: the import of products such as “foie gras”, which requires a fattening process that is particularly cruel, is still legal in the EU.

Regarding the issues of a nutrition transition geared towards sustainability, one can, quite clearly, determine and specify the extent of the extraction of resources for each food item (the so-called “nutritional footprint”)¹⁶³. In the area of meat consumption, there are to be assessment procedures which the consumer can more easily verify. The plethora of marks and seals however, does not make it easy for the consumer to find their bearings. Alongside the two large, governmental organic seals, individual agricultural associations use the seals of their own associations (for instance: Bioland, Demeter); furthermore, there are animal welfare seals which vary in the level of information given. Meanwhile, four out of five large trade chains and their suppliers have merged to join the “Initiative Tierwohl” and offer meat products in four categories of quality. In January 2019, the Federal Minister of Agriculture, Klöckner, announced an animal welfare seal for pork, involving three levels, which is to be introduced from 2020 (cf. Box 18). It is indispensable that adherence to the governmental seal is not merely voluntary, but obligatory, according to law.

¹⁶² Hans-Heinrich Fiedler: ... und herrschet über das Vieh ... Schwein, Pute und Huhn – Sache oder Mitgeschöpf?, Oldenburg 2014, p. 39 ff.

¹⁶³ Cf. for the entire topic: Uwe Schneidewind: Ernährungswende – Umwelt und Gesundheit zusammenbringen, in: idem: Die Große Transformation. Eine Einführung in die Kunst des gesellschaftlichen Wandels, Frankfurt/Main 2018, chap. 15, p. 245 ff.

Box 18: “Tierwohl” (Animal Welfare) Seal for Meat

Sector Initiative “Tierwohl”

In the “Initiative Tierwohl” (initiative for animal welfare), businesses and associations from agriculture and the meat and food retailing industries have jointly set themselves the target of promoting more animal-welfare-oriented and more sustainable meat production. In the early part of 2019, four of the five German food retailing chains with the highest turnover were already participants in the sector-wide initiative (Edeka, Rewe, Schwarz and Aldi Group).

The food retailing businesses pay 6.25 Cent per kilogram of pork, poultry and sausage sold to the initiative (annually, this comes to altogether about 130 million Euro). From these funds, livestock owners who are taking part in, and are certified by, the initiative, are rewarded for the implementation of diverse animal welfare measures (“animal welfare recompense”). There are mandatory criteria for participating agricultural companies, such as the provision of ten percent more space than that which is required as a legal minimum for pigs and poultry, as well as additional organic material for enrichment activities. Taking pig husbandry, as an example, staggered payments for diverse selection criteria include: opportunities for rubbing and scratching, permanent access to roughage and drinking from cup drinkers.¹

Currently, in Germany, about 23% of pigs bred for fattening and 31% of broiler chickens are kept in compliance with the criteria for the “Initiative Tierwohl”. Criticism is, first and foremost, levelled at the fact that the requirements are only marginally higher than those of legal standards.²

The lowest of four levels specified by the seal stipulates that the animals are given ten percent more space; this means, in concrete terms, that, for instance, 23 broiler chickens rather than 26 share a square metre of space. Regulatory standards attribute a minimum of 0.75 m² to each fattening pig of between 50 to 110 kilograms. Ten percent more therefore, means 0.83 m². By comparison: In organic farming, fattening pigs are given a minimum of 1.3 m² of space and, in addition, one square metre of a run in the open air.

Labelling of the Form of Husbandry by the Food Retailing Industry

From April 2019, several of the large food retailing businesses that are also taking part in the sector initiative, intend to issue a unified label to identify the type of husbandry used to produce the meat, which involves four levels and is indicated by the term “form of husbandry”. Level 1 corresponds with the legal minimum standards and level 4 with organic animal husbandry.³

Two-Tiered Animal Welfare Label of the German Animal Welfare Federation (Deutscher Tierschutzbund)

In 2013, the German Animal Welfare Federation introduced its own, two-tiered animal welfare label “Für Mehr Tierschutz” (for more animal protection), which was initially used for products made from broiler chickens and fattening pigs. In 2016, the label programme was expanded to be applicable to laying hens and, in 2017, to dairy cows. The label covers the entire production chain right to the point of slaughter.

Even at the first level, the animal welfare requirements are far higher than the minimum legal standards. They demand i.a. structured barns, more space and opportunities for enrichment activities, cold scratching area for hens, a ban on tethered housing for dairy cows and a limit to the daily weight gain permitted in broiler chickens. Moreover, there is a

particular focus on animal health. The highest level specifies standards which are slightly below the standards required in organic animal husbandry. Access to outdoor-climate areas, runs or free-range husbandry are also prescribed.⁴

National Animal Welfare Label for Pigs

In January 2019, the Federal Ministry of Food, Agriculture and Consumer Protection (Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, BMEL) presented key points of a three-tiered, national animal welfare label for pigs. It covers the entire production chain, from the breeding process to the slaughter. At all three levels, stricter criteria than those specified in the statutory provisions that were previously laid down, are enforced. Thus, the pigs are given at least 20 % more space. Roughage and organic material for enrichment activities must be permanently available. Structured pens are mandatory. Cup drinkers are to be provided. Participation in the marketing chain surrounding the animal welfare label is voluntary. However, the actualisation of the label is to be sponsored by the state. The introduction of the national animal welfare label for pigs is planned for 2020 and the criteria specifying requirements for other farm animals are to follow.⁵

Criticism is directed at the slow pace of the process towards a standardised, national animal welfare label and the current confusion amongst consumers regarding the different labels from the most diverse of agents. In addition, state-specified label standards are frequently called for, which would need to set requirements that are distinctly above the present statutory minimum standards. Furthermore, there are objections to the fact that participation in the labelling system is voluntary. Only an animal welfare label system specifying the conditions of the animals' origin and type of husbandry which is made binding for all agricultural businesses would be able to facilitate a large-scale improvement in keeping conditions. In addition, an ambitious and transparent animal welfare label for the whole of the EU would need to be the objective, if market distortions are to be avoided. It is also true that the allocation of national labels cannot be a substitute for the remedying of deficits in animal husbandry, as well as the necessary raising of statutory requirements for animal husbandry standards.

¹ <https://initiative-tierwohl.de/>.

² <https://www.verbraucherzentrale.de/wissen/lebensmittel/lebensmittelproduktion/initiative-tierwohl-22088>.

³ <https://www.haltungssystem.de/>.

⁴ Deutscher Tierschutzbund (2019): Tierschutzlabel. Informationen für Verbraucher <https://www.tierschutzlabel.info/verbraucher/>.

⁵ BMEL (2019): Staatliches Tierwohlkennzeichen für Schweine: Klöckner stellt Kriterien vor; https://www.bmel.de/DE/Tier/Tierwohl/_texte/Einfuehrung-Tierwohlabel.html.

4.3 *Thou Shalt not Kill, but Prevent Suffering* – Aspects regarding Veterinary Medical and Breeding Ethics

Veterinarians see the reality of various forms of husbandry. Simultaneously, they are advocates for the greatest possible prevention of pain and suffering in animals through husbandry conditions and at slaughter, since it is part of their binding pro-

fessional ethos to prevent suffering in animals. Their work is always located at the interface between the interests of the agricultural industry and the central definition of the German Animal Protection Act, the purpose of which is, “on account of humankind’s responsibility towards animals as our fellow creatures, to protect their life and well-being. No person may, without rational cause, inflict pain, suffering, injury or lasting harm to animals.”¹⁶⁴ How one can precisely define the legitimate objective needs which constitute such “necessary causes”, as well as their limits in each concrete case, must remain the subject of permanent ethical reflection.

The forum “Tierärzte für verantwortbare Landwirtschaft” (veterinarians for responsible agriculture), which was founded in 2012, addresses some of the obvious problems of the current agricultural system and, from a veterinary perspective, calls for an agricultural turnaround. The foundational position paper of 2015 states, i. a.:

“The veterinarians of this forum postulate that the substantial problems caused by industrial agriculture will increase, as a result of the system itself. Since the fields of animal protection and the use of medicines lie within the professional responsibility of the veterinarians, they, the veterinarians, hold a key position within the system. They are obliged to address this task and execute their position with responsibility ... Livestock husbandry (especially of pigs and poultry) [is undertaken] under conditions which significantly impair the animals’ well-being and ability to live out their needs and behaviours – and under which the animals are allowed to suffer pain and be deprived of all dignity. They are obliged to address the breeding of defects through the selection of traits which produce the highest possible performance, as well as animals’ adaptation to inadequate keeping conditions through amputations and other procedures, in addition to the elevated use of medicines. These practices constitute a disregard of the stipulation in the constitution which determines that the protection of animals, as our fellow creatures, is a national objective. Rather, [the consequence is the] displacement of smaller, more regional structures through industrialised, large farms, in which the intensity of care is downscaled. This development is associated with negative, social consequences for the rural population, as well as for the structure of the rural area in general.”

¹⁶⁴ Hans-Heinrich Fiedler: ... und herrscht über das Vieh ... Schwein, Pute und Huhn – Sache oder Mitgeschöpf?, Oldenburg 2014, p. 32 ff.

What is particularly remarkable is the honest admission that the veterinarians are themselves, in many ways, involved in the present dilemmas and are suffering from great external pressures which cause them to violate the basic obligations that their position as veterinarians entails, and do so increasingly:

“Official veterinarians are subjected to inordinate amounts of pressure from politics and agribusiness. They are involved in the substantial lack of enforcing farm animal protection. Thus, issuing certificates of exemption so as to enable procedures to be carried out on animals for their adaptation to the keeping conditions, has become the norm. Many veterinarians feel powerlessly exposed to these pressures and are barely able to see a way for independent action that is in line with the code of medical ethics (veterinarians as ‘appointed protectors of animals’).”¹⁶⁵

Furthermore, there are ethical aspects which deserve more attention. Whilst these are little known in the public sphere, experts are concerned about the grave effects of genetic manipulation, for example in pig breeding, when so-called “super muscly pigs” are produced.¹⁶⁶

Box 19: Modern Scientific Insights as Instigators of the Discourse on Animal Ethics

The Strong Influence of the Sciences – A New View of Animals

During the last few decades, a large number of new, scientific insights, particularly from the areas of evolutionary biology, genetics, neurobiology and behavioural biology, have led to a new perspective concerning the cognitive, emotional and social competencies of animals. These are now being used to justify rising standards regarding the protection of animals.

The scientific debates have strongly contributed to a greater relevance being attributed, not only to the reduction of suffering, but also to facilitating conditions in which the animals enjoy positive emotions whilst under the care of humans. The positive effect of an enriched environment and the stimulation of the animals’ cognitive and learning abilities for their own well-being, was first demonstrated in zoo animals. These concepts are now also being tested on farm animals.¹

Using scientific methods, farm animal ethology – the behavioural biology of farm animals – compiles valuable suggestions into a configuration of husbandry conditions that is suitable for a more species-appropriate design of keeping conditions. Thus, the Leibnitz-Institute for Farm Animal Biologie undertakes interdisciplinary research regarding issues of animal welfare and animal health. The scientists’ focus is directed towards the physical and psychological coping strategies used by farm animals as regards their living conditions. The

¹⁶⁵ <http://www.tfvl.de/positionspapier/>.

¹⁶⁶ Judith Benz-Schwarzburg, Arianna Ferrari: Super-muscly Pigs. Trading Ethics for Efficiency. Issues in Science and Technology 32, no. 3, Spring 2016; http://www.academia.edu/24598428/Super-muscly_pigs_trading_ethics_for_efficiency.

broad scientific spectrum, from the level of immunobiology to the animals' behaviour in their social community, is included in the research. Through the measuring of physiological biomarkers, the mechanised interpretation of animal sounds and the automatic detection of behavioural activities, etc., a variety of insights are gleaned which can help improve animal welfare. Some of the particular focal points include the cognitive abilities of farm animals and the stimulation of their learning behaviour.²

Animals and Humans are Similar

There is, to some extent, a high genetic conformity between humankind and mammals. In particular the genome of the chimpanzee closely matches the human genome. However, the brains of the two different species are distinctly different, with the exception of the oldest, evolutionary parts of the brain.³

As an omnivore, the domestic pig is most similar to humankind in terms of nutrition. There is active research regarding questions of potential xenotransplantation from pig to human.⁴

To some extent, there is a profound shock and unease at the new insights regarding behavioural biology. Many of the abilities of the more highly developed animals differ merely in degree (and not in principle), from those of humankind. Many of the characteristics of humankind, which were previously supposed to be unique, are being increasingly discarded. For instance, the use of tools amongst animals is particularly well researched among primates and birds. Thus, orang-utans, whose DNA matches our human genome to a degree of 97% and which have long-term memory, are able to fashion complex crook knives, whilst children are only able to do this successfully from the age of 8 years old.⁵

To a limited extent, diverse animal species possess an awareness of the self (apes, dolphins, elephants, ravens). Individual creatures of such species are able to recognise themselves in a mirror. Amongst animals who live together in family associations, or as couples, mourning, as well as caring for sick members of the group, have been verified.⁶ Chimpanzees hunt in groups, since their co-operative behaviour is a precondition for their hunting success.⁷ Some birds and monkeys pass on what they themselves have learnt onto their descendants, as cultural assets.⁸ In zoo animals, tests involving touchscreen-computer systems guide monkeys and birds to undertake great feats of intelligence and also stimulate their play instinct: For instance, monkeys can make a rough estimate of quantities.⁹ The feats of intelligence and social capacities of farm animals are becoming better known through exact scientific investigation.¹⁰

For farmers, it will become increasingly important to know the social behaviour of, for example, cattle, in order to enhance their sense of well-being.¹¹ A positive human-animal relationship will lead to higher performance and greater animal welfare amongst cattle. There are scientifically evaluated methods to assess positive relationship management in cattle. In order to do this, some expert knowledge about the behaviour and perceptual abilities of cattle is important. In addition, it is important to have a high degree of knowledge about a species-appropriate way of handling the animals: for example, regular stroking of calves will lead to a long-term reduction of their stress levels. Methods such as Low Stress Stockmanship will also make the work of animal handlers much easier.¹²

Animals and Humans Differ Greatly

In turn, animals and humans are also very different. To some degree, anthropocentric projections, which are neither productive nor species-appropriate, are made with regard to

animal welfare. Therefore, livestock scientists are currently investigating, through preference tests, which forms of husbandry the farm animals themselves favour. In addition, they attempt to ascertain, for instance, how much effort a laying hen will expend in order to reach a nesting box or how much energy a bovine will use up in order to reach a fur brush.

Through targeted environment enrichment, the lack of stimulation and activity in animals is to be remedied. Environmental enrichment applies to several areas (structures, sensory stimuli, the strengthening of social interaction, diversity of fodder, cognitive challenges). Cognitive enrichment is, as yet, the least researched aspect. Scientific, experimental data is predominately available for goats and pigs. The animals are given species-appropriate learning tasks and are rewarded with food or water. In this way, the animals create positive associations and thus enhance their sense of well-being. In addition, they experience being able to control their environment to a certain degree. Cognitive environmental enrichment is attributed with having great potential to significantly improve the keeping conditions of farm animals in the future.¹³

People often want to recognise themselves in the animal. However, animals are frequently alien to our nature and have their very own form of intelligence and perception. Even the evaluation of, e. g., animals' intelligence is often a purely anthropocentric projection.

Animals are frequently able to perceive details in very specific ways. Due to her exceptional sensitivity to the perceptive faculties of cattle, e. g., the autistic scientist Dr. Temple Grandin of Colorado State University has contributed greatly to the remodification of a large proportion of abattoirs in the USA, making them more bovine-friendly facilities. Grandin has also conducted research on the enrichment of the living environment of pigs – and some of the more animal welfare-oriented ways of slaughter, as well as on training methods for farmers and slaughterhouse personnel.¹⁴

¹ Norbert Sachser (2018): Der Mensch im Tier. Warum Tiere uns im Denken, Fühlen und Verhalten oft so ähnlich sind.

² Leibniz-Institut für Nutztierbiologie (2018): PB2: Tierwohl & Tiergesundheit; https://www.fbn-dummerstorf.de/forschung/programmgebiete/pb2-tierwohl-tiergesundheit/?no_cache=1.

³ Max-Planck-Institut für evolutionäre Anthropologie (2018): Langsame und späte Evolution des menschlichen Gehirns; <https://www.mpg.de/11882963/homo-sapiens-gehirn-evolution>.

⁴ Die Debatte (2018): Organspender Schwein? Wie Forscher die Hürden der Xenotransplantation überwinden wollen; <https://www.die-debatte.org/organspende-xenotransplantation/>.

⁵ Universität Wien (2018): Den Haken neu erfinden; <https://medienportal.univie.ac.at/presse/aktuelle-pressemeldungen/detailansicht/artikel/den-haken-neu-erfinden/>.

⁶ Wissenschaft im Dialog (2017): Haben Tiere ein Bewusstsein und inwieweit unterscheidet es sich von dem des Menschen?; <https://www.wissenschaft-im-dialog.de/projekte/wieso/artikel/beitrag/haben-tiere-ein-bewusstsein-und-inwieweit-unterscheidet-es-sich-von-dem-des-menschen/>.

⁷ Max-Planck-Institut für evolutionäre Anthropologie (2018): Schimpansen arbeiten bei der Jagd zusammen. Die aktive Teilnahme an der Gruppenjagd sichert frei lebenden Schimpansen den Zugang zu Fleisch; <https://www.mpg.de/12257959/fruchte-der-gemeinsamen-arbeit-fur-frei-lebende-schimpanzen>.

⁸ Christophe Boesch and Andrew Whiten (2001): Die Kultur der Schimpansen; <https://www.spektrum.de/magazin/die-kultur-der-schimpanzen/827477>.

⁹ Zoo Heidelberg (2018): Computerspiele für Vögel und kleine Affen. Forschungsprojekt „Wie denken Tiere?“ im Zoo Heidelberg; <https://www.zoo-heidelberg.de/computerspiele-fuer-voegel-und-kleine-affen/>.

¹⁰ Joachim Retzbach (2017): Verhaltensforschung: Neugierige Schweine, mitfühlende Hühner. Immer mehr Studien belegen: Lernvermögen und Sozialverhalten von Nutztieren wurden bislang grob unterschätzt. Was bedeutet das für unseren Umgang mit ihnen?; <https://www.spektrum.de/magazin/von-wegen-bloede-ziege-so-intelligent-sind-nutztiere/1446697>.

- ¹¹ Roland Knauer (2015): Rinderpsychologie: Wie tickt die Kuh?; <https://www.spektrum.de/news/warum-landwirte-die-psychologie-ihrer-kuehe-kennen-sollten/1348482>.
- ¹² Forschungsinstitut für biologischen Landbau (2014): Erfolgreiches Rinderhandlung: wahrnehmen, verstehen, kommunizieren; https://www.bioland.de/fileadmin/dateien/HP_Dokumente/Verlag/Erfolgreiches_Rinderhandlung.pdf.
- ¹³ Internationale Gesellschaft für Nutztierhaltung (2017): Emotionen und Stimmung bei Nutztieren; http://www.ign-nutztierhaltung.ch/sites/default/files/PDF/IGN_FOKUS_2017_RZ_web.pdf.
- ¹⁴ Temple Grandin: Livestock Behaviour, Design of Facilities and Humane Slaughtering; <http://www.grandin.com/>.

The impetus for a new, ethical reflection regarding principles of animal breeding has a far more dramatic background than is known about in the public sphere. They concern – above and beyond the area of meat consumption – the general ecological consequences of the industrialised model of animal breeding. Scientific studies state that worldwide, a massive extinction of livestock breeds is taking place. According to the FAO, of the recognised 6,500 livestock breeds, 1,000 already died out in the 20th century. A further 2,000 breeds are currently critically endangered. The diversity of the breeds that have been raised for thousands of years is a great treasure for humankind. Many native breeds possess valuable genetic properties which become lost in the high-yielding breeds, through the setting of single-purpose breeding objectives. The old breeds often provide lower yields, e. g., they are quite undemanding, more resistant to illnesses, have a particularly good feed conversion ratio for basic feed and are tolerant towards extreme climate extremes. In addition, they have a smaller frame, causing less damage to the ground through trampling on mountain slopes or more delicate vegetation, etc. Of particular importance are the old, dual-purpose breeds (e. g. cattle which can be used for both meat and milk production). Thus, the question arises as to how the old livestock breeds can be better protected.

4.4 Top Quality Meat Instead of Discount Meat? – Aspects of Market or Business Ethics within the Area of Meat Production

Non-agricultural entrepreneurs are able to exercise some discretionary competence regarding issues pertaining to the complex interdependencies of animal welfare, human welfare and creation justice: Although there are, within national as well as international arenas, numerous approaches towards business ethics and the problems associated with Corporate Social Responsibility (CSR), as well as questions surrounding leadership ethics in the economic system, there are, as yet, few publications which discuss the ethics that apply to the meat producing industry. On the website of the

Federal Association of the German Meat Industry, one finds a great deal of information about price and also demand development, yet relatively few references to an ethical code of the meat industry.¹⁶⁷

An inspiring example is the “Food Ethics Council”, which was developed in Great Britain and which has been active at a national level since 1998. It has compiled ethical guidelines for livestock breeding, animal husbandry, meat production and agriculture, and brought these into the debates within society.¹⁶⁸ In connection with this, there is also a forum involving representatives of the meat producing industry in London who meet at regular intervals.¹⁶⁹ Furthermore, a “toolkit for food ethics business” is also available at the forum.¹⁷⁰

From the perspective of the churches, key questions regarding business ethics in the area of meat production include, for example:

- How can transparent information about the quality of the meat and the keeping conditions of the farm animals be connected with the labelling of the products?
- How can the needs of a range of customers, who are becoming increasingly sensitised towards ethical questions, be sufficiently satisfied, without jeopardising the competitive power of a business?
- How can the higher costs of high-quality meat production be distributed in a way that meat products from farms ensuring greater animal welfare are not only enjoyed by particular groups of customers?

The ecological consequences of the economic success story of the model of industrialised agriculture and animal production are becoming ever more obvious. “No individual player is responsible for these growing side effects: Rather, consumers, farmers, trade and industry are captives within a nutrition system in which the prices, which were lowered through intense international competition, now ensure that the pressure to economise remains high for all the agents in the supply chain. It seems difficult to escape from this spiral.”¹⁷¹ However, there are helpful ideas emerging regard-

167 <https://www.bvdf.de/>. There is no separate topic relating to ethics on the title page of the meat industry’s website; however, when conducting a Google search for the word “ethics”, one finds 40 hits and a reference, e. g., to the symposium of the research undertaken by Tönnies on animal protection, economics and ethics, in Febr. 2018, in Berlin; cf. <https://www.fleischwirtschaft.de/wirtschaft/nachrichten/Tierwohl-Wir-muessen-etwas-aendern-36342>.

168 <https://www.foodethicscouncil.org/about-us.html>.

169 <https://www.foodethicscouncil.org/getinvolved/businessforum.html>.

170 <https://www.foodethicscouncil.org/resources/ethicaltools/ethics-a-toolkit-for-food-businesses.html>.

171 Uwe Schneidewind: *Die Große Transformation*, Frankfurt/Main 2018, p. 249f.

ing business ethics as well as consumer ethics, as to how one may, to some extent, break away from this cycle of market forces.¹⁷²

4.5 *A Different Way of Living, a Different Way of Shopping – Local Churches, Procurement and the Churches’ Lease of Land: The Church as a Trendsetter or an Obstacle for a Nutrition Transition?*

From the perspective of church history, the Church, in the form of local churches, has a long tradition of dealing with conflicts concerning food and nutritional styles (cf. even in the Early Church, there were conflicts over issues of nutritional styles to be found; see 1 Cor 10: 14 ff.). It is important that the Church – although, for ecological, development and health-related reasons, it clearly speaks out in favour of reversing a trend and aiming for a diet containing less meat – that it does not prescribe a certain nutritional style as a doctrinal principle. Put pointedly, vegetarians, flexitarians and meat-eaters attempting to reduce their meat consumption, as well as those who are not, all belong, together, around the Lord’s table. For we all live on God’s grace and are all entangled in the nexus of sin created by the present misguided forms of industrialised meat and food production worldwide. “A future which is worth living needs them all: vegans and vegetarians, as well as protagonists of sustainable animal husbandry”.¹⁷³ The ways of living together and the respectful dialogue of learning between various nutritional styles within the Church, is one of the important contributions that the Church can make towards the issue of a nutrition transition. At the same time, we must not forget that the Church, with its variety of local churches, as well as its institutions and agencies, can be a major consumer and trend setter within the nutrition transition. Whenever diaconal institutions and churches adopt clear, trendsetting resolutions in their facilities, sourcing their food supplies from regionally produced, sustainable outlets that have a greater focus on animal welfare¹⁷⁴, it will

172 Cf. “Zehn-Punkte-Plan der ökologischen Handlungsoptionen in der Ernährungsbranche”, Wuppertaler Institut für Umwelt, Klima und Energie, in: Uwe Schneidewind: Die Große Transformation, Frankfurt/Main 2018, p. 251.

173 Anita IdeI, quoted in: Hans-Heinrich Fiedler: ... und herrschet über das Vieh ... Schwein, Pute und Huhn – Sache oder Mitgeschöpf?, Oldenburg 2014, p.116.

174 In 2018, the Protestant Lutheran Church in Northern Germany adopted a procurement regulation intended to make eco-fair procurement obligatory. This also includes the procurement of foodstuff; <https://www.kirchenrecht-nordkirche.de/kabl/41053.pdf>. The institution “Haus am Schüberg” in Hamburg, e.g. uses predominately organic foods from the region; www.haus-am-schueberg.de. The Academy Bad Boll has been a pioneer regarding eco-fair cuisine for many years; <https://www.ev-akademie-boll.de/nc/tagungszentrum/gastronomie.html>.

have an important function for testimony and transformation. Some have already made such a pioneering resolution; and the synods, parish councils and governing bodies of the Diakonie (the diaconal ministry of the EKD) are then confronted with the questions as to how the potentially higher costs incurred by the programmatic work for the sustainability transition within nutritional policy, can be borne and allocated.

In recent years, the debate within the churches and the general public regarding the extent to which the principles concerning the lease and management of church land should include ecological principles and criteria of an animal welfare-oriented livestock husbandry, has become more intense.¹⁷⁵ In 2016, the discussions and criteria within the regional churches that related to a sustainable lease of church land resulted in the “Loccum Appell” (Loccum appeal).¹⁷⁶ In 2017, the Synod of the Protestant Lutheran Church in Northern Germany (Nordkirche) consulted about a submission in which the postulates of this appeal were translated into detailed recommendations for the churches as landlords and lessors.¹⁷⁷ The submission was not adopted however. In both papers, no direct reference to animal husbandry was made.

This is different to that which took place in the Protestant Church in Central Germany (Evangelische Kirche Mitteldeutschlands, EKM): Here, an evaluation process for the granting of a lease was conducted which, following the Synod resolution of 2016, led to a differentiated tendering procedure. In relation to animal husbandry, the guidelines specify the following: “Conventional and organic agriculture have legitimacy in equal measure, provided that the soil management is carried out in sustainable ways and that livestock husbandry is undertaken in conformity with our ethical responsibility towards our fellow creatures. The EKM objects to an industrial form of mass husbandry which is not land-bound. Every leaseholder is expected to adhere to a maximum stocking density limit and to endeavour to avoid genetically-modified feed. The EKM objects to the systematic, gender-based killing of animals (i. a. chicks).”¹⁷⁸

175 Cf. the recommendations for the issuing of particular land lease which can also be found in the most recent study published by the Advisory Commission for Sustainable Development: Evangelische Kirche in Deutschland: *Geliehen ist der Stern, auf dem wir leben. Die Agenda 230 als Herausforderung für die Kirchen.* EKD-Texte 130, Hannover 2018, p. 41 ff.; https://www.ekd.de/ekd_de/ds_doc/ekd_texte_130_2018.pdf.

176 Loccum Appell, <http://www.kiir.de/wp-content/uploads/Loccum-Appell.pdf>.

177 Synod resolution on guidelines in relation to church land ownership, Nordkirche 2017, https://www.nordkirche.de/fileadmin/user_upload/Synodenportal/Dokumente_2017/Synode-201703-TOP-6-6-Impuls_zum_Umgang_mit_kirchlichem_Landbesitz.pdf.

178 https://www.ekmd.de/attachment/aa234c91bdabf36adbf227d333e5305b/2f7c08e9f46046b2b712b4de3718e45b/leitlinien_zur_verpachtung_kircheneigener_landwirtschaftsflaechen.pdf.

In 2017, the Protestant Church of Westphalia published “criteria for the lease of church land in the Protestant Church of Westphalia”.¹⁷⁹ These are also based upon the appeal of Loccum, yet contain, in their “guidelines for the lease”, questions relating to the type of animal husbandry: “Does the conventional business follow sustainable criteria in its economic management, e. g. by making additional efforts in the area of animal welfare and animal health? (grazing for cattle; material for enrichment activities for pigs; refusing to dehorn calves; absence of fully-slatted floors; refusing to perform non-curative procedures on animals; a reduction in antibiotics to the necessary level; the use of predominately native and genetically-unmodified feed).”¹⁸⁰

4.6 **Summary: Priorities for the Intensification of the Dialogue between the Church and Society about Animal and Food Ethics in Germany and Worldwide**

The previous paragraphs of the study have revealed

- the extent to which, up until now, the diverse background conditions, statutory provisions and divergent standards in national, European and global spheres, impede a transition towards an improved quality profile within the area of basic issues relating to human-animal ethics;
- that very different fields of ethical responsibility are affected by issues pertaining to the nutrition transition and animal protection, and that the transformation processes need to complement each other within the areas of consumer ethics, professional ethics within agriculture, the ethics involved in framework legislation, veterinary ethics, the ethics applying to breeding and business ethics within the meat industry;
- that ecclesial institutions themselves have great responsibility to set good examples and agree to abide by shared quality standards for nutritional quality, animal justice and basic principles relating to the lease of land and animal husbandry upon ecclesial lands. In this way, a transition towards greater animal protection, improved animal husbandry and nutritional quality can be advanced.

¹⁷⁹ Criteria for the lease of church land in the Protestant Church of Westphalia, EKvW 2017, http://www.kircheundgesellschaft.de/fileadmin/Dateien/Fachbereich_III/Dokumente/Handreichung_Broeschuere.pdf.

¹⁸⁰ Similar guidelines on the lease of land have been produced by the Protestant Church of Berlin-Brandenburg-Silesian Upper Lusatia (EKBO), which recommends leasing 25–50 % of the agricultural land in the churches’ possession to organic farming businesses: Handreichung zur Verpachtung landwirtschaftlicher Nutzflächen. Hinweise und Empfehlungen für Gemeindegemeinderäte in der EKBO, Berlin 2016.

We present the following recommendations as priorities for the intensification of the dialogue regarding animal and nutritional ethics within the Church and society in Germany:

- Legal stipulations for husbandry standards and product labelling. The successful, clear standardisation of quality attributes in eggs must also be made possible for milk and meat: Consumers do not wish to be confused by a plethora of diverse labels when shopping, but they desire clear and future-oriented, national or European certification marks which are officially recognised and easy to understand.
- Promotion of a forward-looking regional agriculture and animal welfare-oriented husbandry system. In this, the regional cultivation of fodder i. a. should be a particular focus (“protein strategy”).

In addition, we recommend focussing on the following European and global negotiation processes as priorities for the intensification of the dialogue on animals and nutritional ethics within church and society at global level:

- We need a stronger international legal base for standards in animal husbandry (a clear reference to standards relating to animal ethics is, as yet, missing from the Sustainable Development Goals (SDGs) and are urgently required).
- The standards for animal health in the EU¹⁸¹ need to be made verifiable in greater detail, as well as being linked to, and complemented with, standards of animal husbandry and meat quality. For such a purpose, the Scientific Advisory Council for Agricultural Policy, Food and Consumer Protection linked to the Federal Ministry of Food, Agriculture and Consumer Protection (Wissenschaftlicher Beirat für Agrarpolitik, Ernährung und gesundheitlichen Verbraucherschutz beim Bundesministerium für Ernährung und Landwirtschaft) presented some initial suggestions in its report of April 2018: “For an EU Common Agricultural Policy serving the public good after 2020: Fundamental questions and recommendations” (“Für eine gemeinwohlorientierte Gemeinsame Agrarpolitik der EU nach 2020: Grundsatzfragen und Empfehlungen”), which included, for instance, that the remuneration for animal welfare enhancements in EU-countries make more use of animal-based indicators (such as hoof health, somatic cell count in milk and joint inflammations) rather than exclusively relying upon management-based indicators.¹⁸² The EU needs to

¹⁸¹ Cf. https://ec.europa.eu/food/animals/health/regulation_en.

¹⁸² Bundesministerium für Ernährung und Landwirtschaft: Wissenschaftliche Beirat für Agrarpolitik, Ernährung und gesundheitlichen Verbraucherschutz beim Bundesministerium für Ernährung und Landwirtschaft: Für eine gemeinwohlorientierte Gemeinsame Agrarpolitik der EU nach 2020: Grundsatzfragen und Empfehlungen, April 2018; p. 75; <https://www.bmel.de/SharedDocs/Downloads/Ministerium/Beiraete/Agrarpolitik/GAP-GrundsatzfragenEmpfehlungen.pdf>.

commission a social-ecological forward projection of potential future scenarios for the European meat industry.¹⁸³ The FAO's guidelines for Global Animal Production and Livestock Industries need to be amended to include mandatory social-ecological and animal welfare-related standards.¹⁸⁴

- Above and beyond this, it is to be hoped that the directives and individual commitments resolved upon by participating Ministers of Agriculture at the G20 Summit in Buenos Aires in November 2018, in relation to the topic "A Sustainable Food Future"¹⁸⁵, are translated into national resolutions and indeed implemented. Point 8 of this declaration called for a marked turnaround, away from agribusiness and towards traditional forms of agriculture:

"We believe that the challenges of achieving food security and nutrition and promoting sustainable agriculture in a changing climate and biosphere, can and must be addressed jointly and collaboratively. We will promote sustainable agriculture and the fight against climate change through collaborative partnerships, encouraging interdisciplinary approaches and involving farmers in the co-development and evaluation of sustainable agriculture systems, to accelerate the adoption of new technologies and management practices, and to revitalize sustainable traditional farming systems."

- Point 31 of the declaration addresses issues connected with animal welfare and a more integrated approach towards health and health care, with a particular aim to reduce the use of antibiotics in agriculture:

"We emphasise the importance of combating Antimicrobial Resistance (AMR) in a 'One Health' approach promoting access to affordable and quality antimicrobials, vaccines and diagnostics, based on well-developed national action plans. ... We acknowledge the need to promote good practices, preventive measures and health care in order to reduce the need for and optimize the use of antimicrobials in agriculture while striving to restrict it to therapeutic use alone."¹⁸⁶

¹⁸³ Cf. the study published in 2011: http://www.sustainicum.at/files/projects/342/en/additional/report_compmeat_en.pdf.

¹⁸⁴ Cf. <http://www.fao.org/animal-production/en/>.

¹⁸⁵ Declaration of G20 Agricultural Ministers July 28, Buenos Aires, Argentina; cf. also: <https://www.bundesregierung.de/breg-en/chancellor/-a-breakthrough-for-agriculture-says-kloeckner-1506178>.

¹⁸⁶ Cf. further in Point 31: "To foster the prudent and responsible use of antimicrobials, particularly those important for therapeutic use in humans, taking into account WHO's list of critically important antimicrobials for human health and national lists established on the basis of scientific risk assessments carried out, whilst considering chapter 6.10 of the OIE Terrestrial Animal Health Code. The prudent and responsible use of antimicrobials does not include their use for the promotion of growth in the absence of a risk analysis conducted in accordance with CAC / GL 77–2011.", in: <http://www.g20.utoronto.ca/2018/2018-07-28-agriculture.html>.

5. Places of Learning for New Human-Animal Relationships within Church and Society – Practical Examples for an Intensified Learning Strategy relating to Ecumenical Animal Ethics

5.1 Animal Ethics in the Liturgical Year

In the following section, fundamental ethical considerations will not be the focus, but rather, practical and educational suggestions and examples are hereby given as to how a new initiative for the churches' ministry regarding dialogue and education about animal welfare, nutritional styles and meat consumption can be shaped; and which starting points might be helpful. An initial and essential starting point which is already a point of orientation for all churches, is the liturgical year itself. The liturgical year begins with the first of Advent and ends with Eternity Sunday. It links Jesus Christ's stages of life with the year's seasons and their respective challenges. It includes a range of links with topics relating to animal ethics that could be used in educational ministry, in particular with children.

In Advent, Jesus' entry into Jerusalem can be told from the perspective of his mount, the donkey, thus developing the rudiments of biblical animal ethics from the example of the donkey. The story of Balaam in Numbers 22:22–34 is also suitable for reflecting upon animal ethics. The donkey discerns the angel of the Lord long before the seer Balaam. This account might be utilised in Sunday school.¹⁸⁷ The Hebrew Bible conveys the conviction that animals know and worship their creator by intuition, and that, correspondingly, the godliness and justice of the human counterpart is revealed in their behaviour towards all animals.¹⁸⁸

With the motifs of the animals' presence in and around the manger, the services during the Christmas season offer starting points from which to consider the comprehensive significance of God's incarnation and his peace for all of creation, which even extends to the animal world.

¹⁸⁷ <http://www.derkindergottesdienst.de/geschichten/04bileameselin.htm>.

¹⁸⁸ Silvia Schroer: Du sollst dem Rind beim Dreschen das Maul nicht zubinden (Dtn 25,4), Alttestamentliche Tierethik als Grundlage einer theologischen Zoologie, in: Rainer Hagencord (ed.): Wenn sich Tiere in der Theologie tummeln, Regensburg 2010.

In the Epiphany season, the story of Jesus' temptation can be told in the shorter, Marcan version: "... and he was in the wilderness forty days, being tempted by Satan. He was with the wild animals, and angels attended him" (Mk 1: 13). What does it mean to be "with the wild animals"? What kind of interaction did Jesus have with them? It was in the wilderness and whilst living with the animals that the comprehensive meaning of Jesus' mission was first developed. It was only subsequent to these events that his message was proclaimed to the people.

Passiontide not only reminds us of Jesus' suffering, but also of the suffering of every enslaved creature. It is not far-fetched to associate the Passion with industrial livestock husbandry. Does it make sense to speak of a "Passion of the animals" today? What does the resurrection mean for the animal world or even for the relationship of humankind with farm animals?

At the time of Pentecost, the miracle of communication and a language which links the whole of creation could be addressed, in order to reflect upon the communicative abilities of the animals or rather, the non-verbal communication between humans and animals, and to understand the same as part of the miracle of Pentecost.

"Creation Day", and the subsequent "Creation Time", has been established as a new feast day within the liturgical year.¹⁸⁹ In 1989, the Ecumenical Patriarch of Constantinople Dimitrios I. suggested praying together, once a year, during the period from 1st September to 6th October, to the "Creator of the world".¹⁹⁰ It immediately suggests humankind's treatment of animals as the subject of discussion on this day, or during this period, in church services or church events.¹⁹¹

The day of Thanksgiving is perhaps the most important feast day within the liturgical year to, on the one hand, thank God for his harvest gifts, and, on the other, to point out structural injustice across the world. This applies, in particular, to the cultivation of soy as feed for meat production in industrialised nations with its consequences for human beings and the environment, particularly in countries of the Global South. In

189 Evangelische Kirche in Deutschland (ed.): Grüße aus dem Kirchenjahr. Kirchliche Feiertage als kultureller Reichtum, Hannover 2018, <https://www.kirchliche-feiertage-als-kultureller-reichtum.de/das-magazin>.

190 <http://www.ack-nrw.de/publikationen/oekumenische-arbeitshilfe-zum-tag-der-schoepfungsschoepfungszeit/>; cf. also Jörg Menke: Die Vielfalt der Schöpfung feiern. Ökumenische Arbeitshilfe für den Gottesdienst, FEST für die Praxis Vol. 4, Heidelberg 2008.

191 oeku Kirche und Umwelt (ed.): Das Tier – ein Geschöpf wie wir, Arbeitsdokumentation und Magazin zur SchöpfungsZeit 2009; <http://www.oeku.ch/de/bestellungen.php>; cf. especially the varied liturgical material published by the World Council of Churches (WCC): Season for creation: <https://www.oikoumene.org/en/what-we-do/climate-change/time-for-creation>.

some churches, animals are deliberately included in Thanksgiving services or special services are celebrated with animals.¹⁹²

5.2 Animal Ethics in Educational Activities

For all target groups of educational ministry, the debate about contemporary animal ethics is a worthwhile subject. Interaction or encounters with animals are part of the unmediated, experience-based knowledge of every person. Interaction with animals incorporates all dimensions of learning and can often, at every stage in life, have very existential dimensions: The first experiences with death, for example, when a child's hamster dies; a cat as a discussion partner in whom one can confide completely when, for example, during puberty, the relationship with a teenager's parents becomes difficult, or even a dog, who is a companion during long walks and, at times, the only remaining partner during old age. In the truest sense of the word, animal ethics touches upon the existential dimension of faith, because it moves and affects us. In educational ministry therefore, a reflection upon animal ethics should include sensory experiences; it should take place on equal footing with animals.

Thus, the debate about animal ethics in educational ministry involves far more than simple skills acquisition. It is about creating "resonance relationships", which prepare the way for us to enter into a relationship, and involves moments in which we touch each other and are touched mentally and haptically; moments which change the individual and the world.¹⁹³

Excursions, for example, to farms, nature conservation bases and zoos, should be included in educational work. The involvement of pets or therapy animals in learning situations is often helpful. In adult education, activities could include biographical recounts and biography work focussing on the topic "faith and animals". Reflecting upon our biography and the direct, tangible contact that we have with animals, has proved to be beneficial, particularly in educational work with the elderly. In old-age homes, schools, nurseries and nursing facilities, animals are increasingly frequently used for therapeutic purposes.

¹⁹² Aktion Kirche und Tiere AKUT e.V.: Tier-Mensch Themenheft „Gottesdienste Mensch-Tier“, n.y.; https://aktion-kirche-und-tiere.de/cms/front_content.php?idcat=74&lang=1.

¹⁹³ Hartmut Rosa, Wolfgang Enders: Resonanzpädagogik. Wenn es im Klassenzimmer knistert, Weinheim 2016.

In recent years, didactic materials have been developed for daycare facilities, both within primary¹⁹⁴ and secondary education¹⁹⁵. Through the concept of the “Ernährungsführerschein” (licence to cook) initiated by the Bundesverband für Ernährung (federal association for nutrition), which is i. a. also supported by the German Association of Rural Women and resourced with very good material,¹⁹⁶ primary pupils can be introduced to issues surrounding reduced meat consumption.

Alternative cookbooks are very widespread in development-related adult education: The way to new approaches towards nutritional ethics is often through the stomach. Recipes for sustainable, seasonal and regionally-produced meals that adopt a conscientious stance towards animal ethics, can thereby be widely disseminated. The alternative cookbook by the Protestant Lutheran Church of Northern Germany, “Mahlzeit, Gemeinde! Die Nordkirche kocht!”¹⁹⁷ (Enjoy your meal, church! The Northern Church is cooking) is a good example of this.

5.3 Farms as Learning Places for Ecological and Animal Ethics

In many innovative examples, farms today do not simply consider themselves to be agricultural production facilities, but ecological and nutrition-related learning places in which basic questions about the sustainability of our lifestyles become manifest and tangible, connected as they are with mass-oriented learning processes. Farms with an ecologically responsible management system become new places of learning about responsible animal husbandry and the high-quality production of fruit, vegetables and meat, as well as about sustainability in agriculture.¹⁹⁸ Even the scientific debate has addressed and investigated the new function of farms as integrated places of learning.¹⁹⁹

194 Axe-Stiftung e. V.: Reihe “Von Schafen – Ziegen – Rindern: Lebendige Begegnung mit unseren Nutztieren”, No. 1–5. The material contains factual information for educators, as well as suggestions for practical implementation. It can only be obtained by ordering with the foundation: www.axe-stiftung.de.

195 EinFach Religion. Interpretationen. Unterrichtsmodell, Magazine: Christliche Tierethik, Jahrgangsstufen 9–13, 2016; Markus Bürger, Rainer Hagencord, Sebastian Jendt: Zeitschriftenreihe Ethik & Unterricht, No. 4/2016 Tierethik, für Sekundarstufe, Seelze 2016.

196 Cf. <https://www.bzfe.de/inhalt/ernaehrungsfuehrerschein-3773.html>.

197 <https://www.kircheuerklima.de/klimafasten/kochbuch.html>; alongside many similar publications: Boris Demrovski, Christian Noll: Das Klimakochbuch: Klimafreundlich einkaufen, kochen und genießen, 2015; Karl von Koerber, Huber Kohler: Nachhaltig genießen, Stuttgart 2012.

198 Cf. e. g. <https://www.waz.de/mediacampus/fuer-schueler/zeus-regional/bottrop-und-gladbeck/die-arche-noah-bottrop-ein-bauernhof-in-der-grossstadt-id8003071.html>; <https://www.arche-noah.at/kalender/termin-im-detail?eid=1379>; <http://www.domaene-dahlem.de/home/http://www.domaene-dahlem.de/home/>; <https://www.vierfelderhof.de/lernen.html>.

199 <https://www.uni-vechta.de/einrichtungen-von-a-z/kompetenzzentrum-regionales-lernen/konzepte-fuer-lernorte-derbauernhof-als-lernort/>.

Across Germany, there are numerous initiatives which relate the ecological and animal ethics-related interdependencies found on farms to nursery and primary school pupils as extracurricular learning opportunities. For example, in Hessa, the initiative “Bauernhof als Klassenzimmer” (the farm as classroom) is sponsored by the Hessian farmers’ association, as well as the Ministry of Culture and the Ministry of Consumer Protection. Through this initiative, links with the subject matters of nutrition, the environment, and education for sustainable development (“Bildung für nachhaltige Entwicklung; BNE”) are fashioned. One module covers livestock husbandry. Participating farms are granted pedagogical training as well as a professional fee for each guided tour of the farm.

There should be a greater number of meetings between consumers and farmers. A realistic understanding of the working conditions of farmers, as well as a critical debate about industrial livestock husbandry are, today, part of ethical and ecological learning within general education.

In other federal states too, there are numerous initiatives which focus on the subject of “the farm as a place of learning”. An advantage of this type of learning is that it enables the children to gather direct, sensory experiences and thereby better understand the subject and its context. The foundation “Bündnis Mensch & Tier” (alliance human & animal) has built up a large library of reference and specialised material as well as children’s books, relating to human-animal relationships, animal husbandry, native pets and wildlife, the protection of species and the environment, and has distributed the collection across 5 farms.²⁰⁰ In some federal states, topics such as animal ethics are addressed in regular school lessons for adolescents.

5.4 Animal Ethics within the Churches’ Events and Establishments

If the Church wishes to take part in the debate within society as a credible partner, the insights gained and deepened within the educational ministry, about the interdependencies between meat consumption, animal welfare and global agriculture, must find a way to be implemented within the everyday actions of ecclesial institutions.

Thus, meals served in the restaurants and cafeterias of church establishments need to be checked to see if meat-free options are available every day. This also includes a

200 <https://www.buendnis-mensch-und-tier.de/bibliothek/tierbibliotheken/>.

responsible way of handling animal-source products such as milk, cheese and eggs. In procurement, the range of options should predominately be chosen according to the following criteria: seasonal / from the region / ecological / from fair trade, and also need to be labelled correspondingly for visitors to the establishments. Anecdotally, within the context of education for sustainable development (Bildung für nachhaltige Entwicklung; BNE), it is said to be of great advantage to make one's own actions transparent and comprehensible for the visitors.

In a special way, this applies to daycare facilities. Children take home the insights about healthy eating gained through the shared preparation and consumption of the meals to their families, thereby becoming ambassadors of a healthy and climate-friendly diet.²⁰¹

The positive response at Protestant Church Conventions (Kirchentage) and ecclesial synods show that sustainable solutions for animal-source foods can even be implemented at major events. In this way, in 2013, the steering committee of the German Protestant Church Convention (Deutscher Evangelischer Kirchentag; DEKT) resolved in its strategy paper “Der Kirchentag isst grün und fair” (the church convention eats green and fair) that by 2019, the DEKT would switch all food for which it was responsible, entirely to ecological and fair products. Using the guide “KleVer – shopping and cooking the climate-friendly way”, the DEKT would like to inspire members of the public “to discover climate protection, even within the area of nutrition, and to find new ways to create a climate-efficient and tasty food culture”.²⁰² For years, the “Glass Restaurant” has offered such meals during church conventions and enjoys great popularity. The learning from such experiences can also be transferred at a congregational level. The relevant criteria and references can be found, for instance, in the brochure “Zukunft veranstalten” (organising events in the future).²⁰³

However, too much meat is still on offer at church festivals. The reduction of meat and the imaginative preparation of vegetarian dishes would be a tangible way to practise animal ethics. Accordingly, cookbooks – even those from churches – support those who are willing to implement such ideas in a practical way.²⁰⁴

²⁰¹ Cf. <https://www.brot-fuer-die-welt.de/themen/satt-ist-nicht-genug-stadt/gesund-es-essen-in-der-kita/>.

²⁰² https://dxz7zqp528hul.cloudfront.net/production/htdocs/fileadmin/dateien/zzz_NEUER_BAUM/Ueber_uns/Umweltengagement/PDF/KleVer/DEKT34_Leitfaden_KleVer.pdf.

²⁰³ www.zukunft-einkaufen.de/fileadmin/ZE%20II/Publikationen/ZE_Zukunft_veranstalten_2_Auflage_2015.pdf.

²⁰⁴ Evangelisch-Lutherische Kirche in Norddeutschland: Mahlzeit, Gemeinde! Die Nordkirche kocht ökologisch, fair, klimafreundlich. regional, saisonal, 2013; https://www.kirchefeuerklima.de/fileadmin/user_upload/baukaesten/Baukasten_Kirche_f_r_Klima/Dokumente/Kochbuch-Innenseiten-RZ-hochaufgelost_01.pdf.

5.5 Animal Ethics in Vocational Training within the Agricultural Sector

Meanwhile, there are diverse approaches which already include new perspectives on animal ethics and agricultural professional ethics in their training courses. In many places, it is recognised that an improved standard of animal welfare in agriculture can also have economic advantages and should not therefore principally be felt to be the enemy of business calculations.²⁰⁵ That organic farming brings considerable advantages within the area of environmental and resource protection, as well as, to some extent, animal protection, has now been proven in a substantial meta-study.²⁰⁶

In the national ordinance on vocational training for the professional farmer, issued by the Federal Ministry of Food, Agriculture and Forestry in 1995, the opportunity to train in a subject such as “animal ethics” is lacking; rather, there is only a small subchapter within the subject area “Animal Production”, which is entitled: “Versorgen von Tieren; rationelles, tiergerechtes und umweltverträgliches Halten” - ‘providing for animals; efficient, animal welfare-oriented and environmentally-friendly ways of keeping livestock’.²⁰⁷ For a long time, scientists with equal levels of qualification in two areas of academia, agricultural sciences and philosophical or Christian ethics,²⁰⁸ were a rather exceptional phenomenon. Today however, reflections upon and publications about animal ethics have obtained their own scientific discourse²⁰⁹ and are increasingly gaining ground in the changed curricula of agronomic training, veterinary studies and specialist forums with a scientific-ecological orientation.²¹⁰ A Bachelor’s degree programme in “Human-Animal-Relationships/Anthrozoology”²¹¹ such as is available at the University of Vienna, is however, still an exception in Germany, as is the Institute for Theological Zoology in Münster.²¹² Nevertheless, for several decades, universities

205 Cf. considerations by Prof. Dr. Peter Kunzmann, Institut für Tierhygiene, Tierschutz und Nutztierethologie der Stiftung Tierärztliche Hochschule Hannover, in: <https://www.moderne-landwirtschaft.de/alle-wollen-dass-tiere-sich-wohlfuehlen>.

206 <https://www.thuenen.de/de/thema/oekologischer-landbau/die-leistungen-des-oekolandbaus-fuer-umwelt-und-gesellschaft/>.

207 https://www.gesetze-im-internet.de/lwAusbv_1995/LwAusbv_1995.pdf.

208 Cf. Prof. Dr. Herwig Grimm from Vienna: <https://qs-blog.de/2017/04/wer-ueber-tiere-spricht-macht-den-menschen-zum-thema/>.

209 Cf. on the history of the new discipline of animal ethics, see the newspaper article “Ein deutsches Tierleben”, in: <https://www.zeit.de/2014/21/deutsches-tierleben-tierrechte/seite-2>.

210 Cf. the lecture at the University of Oldenburg on the topic “Tierethik und Landwirtschaft” by Claudia Preuß-Ueberschär; <https://www.youtube.com/watch?v=pttgWf4qsAg>.

211 https://www.vetmeduni.ac.at/fileadmin/v/z/mitteilungsblatt/curricula/curriculum_anthrozoologie_2010.pdf.

212 <https://www.theologische-zoologie.de/>.

and other research facilities have addressed issues of animal welfare and livestock ethology in a scientific way. Amongst these are, e. g., the degree course in Ecological Agricultural Sciences at the University of Kassel-Witzenhausen, the Leibniz-Institute for Livestock Biology in Dummerstorf and the Institute for Animal Hygiene, Animal Welfare and Farm Animal Behaviour (ITTN) at the University of Veterinary Medicine, Hanover.

Within the training programmes for agricultural professions in Germany, strong support should be given to a further integration and intensification of modules which focus on animal ethics, as well as on agro-ecological subjects. In 2011, at the specialist forum on farm animals of the German Agricultural Research Alliance (Deutsche Agrarforschungsallianz; DAFA), it was observed that: “Today, livestock sciences and respective research no longer focus merely on short-term efficiency regarding the production of albuminous foods, but investigate, at least to the same degree, issues relating to animal protection, animal ethics and environmental protection. In the long term, only a type of animal husbandry that takes seriously the precepts of closed nutrient cycles and implements them, as well as adopting a species-appropriate way of handling animals, will prove to be economically successful and socially accepted”.²¹³ This is still valid today.

5.6 Ethical Dialogue across Diverse Social Milieus Involving Diverse Professional Groups within Society

In recent years, numerous dialogue procedures surrounding the topic of animal husbandry have been initiated. These are however, to some degree, merely interchanges within one’s own, exclusive, professional or ideological niche. Above and beyond this, there are also an increasing number of interdisciplinary forums in which controversial positions are deliberately brought together.

In the legislative period between 2013 and 2017, a Green Paper was processed under the direction of the then Minister of Agriculture, Christian Schmidt, i. a. concerning the topics of animal welfare and animal protection within agriculture and involving

213 Thus Reinhard F. Hüttl: Vorsitzender des BioÖkonomieRats und Präsident der Deutschen Akademie der Technikwissenschaften, 2011; <http://www.schattenblick.de/infopool/umwelt/landwirt/ulafo348.html>.

various partners within society (farmers, veterinaries, animal welfare associations, churches, and consumer advocates, etc.). One of the outcomes was that, from the collection of multi-faceted dialogues, the “National Livestock Farming Strategy for Sustainable Livestock Husbandry in Germany” (Nationale Nutztierhaltungsstrategie – Zukunftsfähige Tierhaltung in Deutschland) emerged in 2017.²¹⁴

For many years, a dialogue concerning agricultural issues has been conducted between the German Farmers’ Association (Deutscher Bauernverband), the German Association of Rural Women, the German Rural People’s Movement and the EKD’s ministry in rural areas, on agricultural issues. In 2017, the four organisations met for a joint seminar focussing on livestock husbandry. Alongside visits to modern pigsties and cattle barns, the problems surrounding diverse target conflicts were exposed (e. g. occupational safety, economic compulsions, air monitoring in livestock shelters and ethical dilemmas).

Even within the agricultural profession, whilst in dialogue with other partners, some large initiatives encourage a self-critical engagement with problems regarding livestock husbandry. Of particular importance is the “Offensive Sustainability” (Offensive Nachhaltigkeit), initiated by the Westphalia-Lippe Agricultural Association (Westfälisch-Lippischer Landwirtschaftsverband; WLW), which began in 2016. As part of this initiative, the farmers’ interest group recognises its responsibility to change so as to adopt sustainable agricultural practices: “During a prolonged process, farmers in the Westphalia-Lippe region identified weak points in their own way of thinking and working, and formulated reasons as to why they needed to change. The following points were acknowledged: “We need to change ... wherever our methods of agricultural production contribute to the damage of soil, water, air, plants and animals, as well as to the spoiling of elements within the cultural landscape.” It is the purpose of the initialised process, to “improve the economic and social stability of the enterprises in the short, medium and long term, as well as to minimise any negative ecological effects of the production and maintain society’s acceptance of farming.” In terms of facilitating greater animal welfare for pigs, cattle and poultry, the association has set itself concrete, ambitious goals and time schedules, and is seeking to engage in dialogue with other partners within society. As part of this process, the WLW is also engaged in dialogue with the local churches.

214 https://www.bmel.de/DE/Tier/_texte/Nutztierhaltungsstrategie.html.

In 2017, the German Agricultural Society (Deutsche Landwirtschafts-Gesellschaft; DLG) issued ten theses under the overall title “Landwirtschaft 2030” (Agriculture 2030).²¹⁵ Thesis 4 reads: “Make Animal Husbandry fit for the Future”. It continues: “Cost-effectiveness and animal welfare are equally important in livestock husbandry. Conflicting goals can be minimized by precise observation of livestock, attentive animal care, good genetics and innovative livestock husbandry systems.” Similarly, it states that: “It must be pointed out in all honesty that conflicting targets between animal welfare, environmental protection, animal health and economics cannot be resolved completely. This must be clarified in the debate within society.”²¹⁶

A discussion about the future of livestock husbandry, targeted at a broad and interested section of the public, was carried out on *Hofgut Oberfeld Landwirtschaft AG* in 2012. This country estate is a citizens’ corporation and farmed according to the *Demeter*-guidelines. Through the connection with diverse initiatives, interested citizens are able to have close contact with livestock husbandry.²¹⁷

The Protestant-Lutheran Church in Northern Germany has, for several years, produced a broad, socio-political discussion series with the title “Meat is not a Vegetable”. By 2005, the Northern Church had adopted a critical position reflected in the statement issued by the governing body of the church: “Zum verantwortlichen Umgang mit Tieren” (on a responsible treatment of animals).²¹⁸ In 2017, the Northern Church published the paper “Zwischen Landwirtschaft und Industrie. Diskussionshilfe zur Tierhaltung am Beispiel der Situation in Mecklenburg-Vorpommern” (between agriculture and industry. An aid for the discussion regarding animal husbandry at the example of the situation in Mecklenburg-Western Pomerania).²¹⁹ It is the objective of this publication to campaign for a good interlinking of economic viability and the integrity of creation, as well as between livestock husbandry and animal protection.

²¹⁵ Landwirtschaft 2030, DLG 2017; <https://www.dlg.org/de/landwirtschaft/themen/landwirtschaft-2030/?L=0>.

²¹⁶ <http://www.dlg.org/5433.html>.

²¹⁷ Symposium | Kühe, Klima, Kapital: Welche Zukunft hat die Tierhaltung in der Landwirtschaft? Verantwortung übernehmen für Landwirtschaft – vor Ort und weltweit!; <https://www.demeter.de/sites/default/files/demeter.de/artikel/dokumente/oberfeldsymposium12dokuweb.pdf>.

²¹⁸ Evangelisch-Lutherische Kirche in Norddeutschland: Zum verantwortlichen Umgang mit Tieren. Auf dem Weg zu einem Ethos der Mitgeschöpflichkeit. Stellungnahme der Kirchenleitung der Nordelbischen Evangelisch-Lutherischen Kirche, 2005; <http://www.kda-nordelbien.de/index.php/tierethik/206-ethos-der-mitgeschoefflichkeit.html>.

²¹⁹ Evangelisch-Lutherische Kirche in Norddeutschland: Zwischen Landwirtschaft und Industrie. Diskussionshilfe zur Tierhaltung am Beispiel der Situation in Mecklenburg-Vorpommern, 2017; https://www.kda-nordkirche.de/f/e/Beitraege/Landwirtschaft/Zwischen-Landwirtschaft-und-Industrie_2017.pdf.

This study guide was initiated by church communities in Mecklenburg-Western Pomerania, where the increasing size of agricultural farms and the changes within animal husbandry were made into a subject for discussion.

Most federal states have firmly-established animal welfare advisors who attend to i. a. issues of animal husbandry. These advisory councils have an advisory function and are, for the most part, heterogenic. In Hesse, the Animal Welfare Advisory Council includes i. a. representatives from the areas of animal husbandry, animal welfare and nature conservation, veterinary medicine, ethology, the legislative assembly of the federal state and churches. One of the great advantages of these advisory councils is that they have worked together continuously for many years and thus enabled genuine dialogue.

In future, such formats should be used more frequently to bring together the most diverse of perspectives, since the area of conflict within animal husbandry can only be improved through the co-operation of a range of expertise and socio-political positions. This requires the creation of a fair culture in which to resolve conflict, as well as compromise. For certain, controversial questions pertaining to animal ethics, it would furthermore be helpful to put together advisory councils for animal ethics at a federal state level, which could address these topics in greater detail.

5.7 Networks between the Church, Agriculture and the Environment

In the Protestant regional churches, commissioners for various matters are appointed who participate in networks. Whilst these people work in their respective regional churches, they also contribute to the socio-political discourse. Across the EKD, they exchange views within their networks and are active in political and social arenas, regarding certain issues, by way of an association or group. Thus, on the one hand, ecumenical contacts have been forged, particularly within professional organisations of the Catholic Church, and, on the other, there are also joint discussion groups, associations or working groups on specific topics that work in co-operation with environmental and agricultural associations, and animal welfare organisations. The co-operative ventures which ensue may, for instance, organise joint public events concerning relevant controversial topics or co-ordinate church services with a thematic focus.

The working group of the environmental officers of the EKD member churches (Arbeitsgemeinschaft der Umweltbeauftragten in der EKD; AGU)²²⁰ was founded in 1982. Nearly all the regional churches have appointed at least one person, if not several people to address topics relating to environmental protection. The AGU has an interdisciplinary structure, so that professional expertise within the fields of the sciences and liberal arts, and in particular theology, can contribute to the work. As part of their active participation in the socio-political debate, in 2001, this body published a study guide, “Fellow Creature Animal”.²²¹

The Evangelische Dienst auf dem Lande (EDL, previously: ADL; rural ministry of the EKD)²²² is the association of the EKD’s regional churches’ rural departments and the specialised service for the EKD’s ministry in rural areas. The range of subjects addressed by the EDL includes issues surrounding agriculture, the development of rural areas in conjunction with the development of their church communities and regional developments, and the living conditions of farming families, as well as of residents in the countryside in general. The EDL observes and promotes the concerns of the churches’ ministry in rural areas within the EKD, and also presents them within the political and public sphere. In 2011, the Protestant-Lutheran Church of Hanover published a dedicated magazine: “Landwirtschaftliche Nutztierhaltung” (agricultural animal husbandry), which summarised the results of a specialist conference and the debate within the regional churches’ Synod. The magazine serves as a working aid for use within church communities.²²³

5.8 Ecumenical Links with International Networks within the Field of Sustainable Development and Animal Ethics

The international dialogue regarding animal ethics has greatly increased in recent years. In order to protect against, and combat, animal epidemics, the “World Organisation for Animal Health” was founded and retained the acronym OIE from its predecessor as the name of the organisation. The OIE functions as a partner of the FAO and is

²²⁰ <https://www.ekd.de/agu/>.

²²¹ The study guide “Fellow Creature Animal” is out of print.

²²² <https://www.kilr.de/edl/wir-ueber-uns/>.

²²³ <https://www.hkd-material.de/kirche.-wirtschaft.-arbeitswelt/arbeitswelt-und-wirtschaft/840/landwirtschaftliche-nutztierhaltung>.

represented in 181 nations. In annual, comprehensive reports, detailed information is given about agreements on new standards of animal health, new animal diseases, regional commissions of the different continents and specialist commissions on various topics pertaining to animal welfare.²²⁴ The organisation “World Animal Protection” in London has a sophisticated website containing a world map which shows the current (very divergent) state of implementation of the minimum standards of animal welfare, as set out by the OIE, that have so far been achieved in the different countries.²²⁵

Furthermore, there are various specialised, international lobby organisations and research networks regarding questions of animal welfare, such as “International Animal Law” that refer to education within the area of animal welfare, international dialogue between animal welfare experts, as well as interdisciplinary research dialogue regarding animal ethics and veterinary medicine.²²⁶ Moreover, more specialised organisations are to be found across the activist network including the “International Animal Rights Conference”²²⁷, the British Network “Animal Freedom”²²⁸ and the “European Society of Dog and Animal Welfare”²²⁹. Some research networks also focus on animal ethics, such as the group “Animal Ethics”²³⁰, or else lobby organisations in which the diverse developments within animal welfare regulations, at both national and global levels, are analysed.²³¹

It is remarkable that, by comparison with secular and political networks, it is only individual, pioneering voices that have advanced the animal welfare movement within the ecumenical movement and Christendom.²³² At the level of world Christianity however, there appears to be no shared platform for issues concerning animal welfare and livestock ethics. In the 1980s, the World Council of Churches led an elaborate debate about the ethical challenges of biotechnology, which also touched upon the questions of genetically modified animal breeding,²³³ yet, as of today, there has

224 Cf. e.g. the 300-page report of the General Assembly in 2017; http://www.oie.int/fileadmin/Home/eng/About_us/docs/pdf/Session/2017/A_FR_2017_public.pdf.

225 Cf. <https://api.worldanimalprotection.org/>.

226 <http://www.animal-law.biz/>.

227 <http://ar-conference.org/>.

228 <http://animalfreedom.org/english/index.htm>.

229 <http://www.esdaw.eu/animal-welfare---vatican-city-state.html>.

230 <http://www.animal-ethics.org/>.

231 <https://www.globalanimallaw.org/database/national/index.html>.

232 https://en.wikipedia.org/wiki/Christianity_and_animal_rights.

233 Cf. World Council of Churches (WCC): Report: Subunit on Church and Society, August 1989; <https://www.oikoumene.org/en/resources/documents/wcc-programmes/justice-diakonia-and-responsibility-for-creation/science-technology-ethics/biotechnology>.

been no significant international, ecumenical study document published by the WCC and its member churches concerning issues of animal welfare and animal protection.

Only the Roman-Catholic Church has positioned itself unambiguously through the environmental encyclical by Pope Francis, “Laudato Si”, in 2015, in which he expressed, using powerful words, the call for a paradigm change in human-animal relationships, whilst clearly rejecting traditional forms of interpreting the *dominio terrae*: In the encyclical, one reads, for instance: “that our indifference or cruelty towards fellow creatures of this world sooner or later affects the treatment we mete out to other human beings. We have only one heart, and the same wretchedness which leads us to mistreat an animal will not be long in showing itself in our relationships with other people. Every act of cruelty towards any creature is ‘contrary to human dignity’”²³⁴

Since 2015, the global “Churches’ Week of Action on Food”²³⁵, has provided an ecumenical platform for practical involvement in issues of animal welfare and a changed nutritional ethics. Supported by the WCC and the Global Ecumenical Advocacy Alliance, the special week is an opportunity to highlight the interrelationships between healthy eating, meat consumption and agribusiness and, at the same time, to lobby for more equitable and sustainable forms of nutrition and agriculture.²³⁶ Stronger co-operation with the churches’ action week for healthy eating, which takes place annually, in October, and is thus close to the thanksgiving tradition, seems to be the most promising approach to make use of ecumenical networking with partner churches and partner communities, thereby inspiring a turnaround in the attitudes towards nutrition, meat consumption and health consciousness, as well as an opportunity to make the public increasingly aware of the great potential that the churches have, globally, as consumers and advocates of setting a course towards sustainability. A helpful instrument for raising awareness and mobilisation are the “10 Commandments on Food”²³⁷, which, in an appealing way, constitute a practical guide to the essential points of a nutritional transition in everyday life (cf. Box 20).

²³⁴ https://www.dbk.de/fileadmin/redaktion/diverse_downloads/presse_2015/2015-06-18-Enzyklika-Laudato-si-DE.pdf, p. 39.

²³⁵ <https://www.oikoumene.org/en/resources/documents/wcc-programmes/diakonia/eaaliturgy-2015-churches-week-of-action-on-food>.

²³⁶ <https://www.oikoumene.org/en/press-centre/events/churches-week-of-action-on-food>.

²³⁷ <https://www.oikoumene.org/en/resources/documents/wcc-programmes/diakonia/eaal/ten-commandments-of-food>.

Box 20: 10 Commandments of Food

The 10 commandments on food were published in their German version by the Global Ecumenical Advocacy Alliance “Food for Life” (“Nahrung für das Leben”). It is a brochure of 35 pages containing material for church and educational ministry.

The Ten Commandments of Food:

1. Give thanks for the food you eat.
2. Eat food grown as close as possible to where you live.
3. Strive for all people to have knowledge about and access to affordable, nutritious food.
4. Eat mindfully and in moderation.
5. Do not waste food.
6. Be grateful to those who grow and prepare food for your table.
7. Support fair wages for farmworkers, farmers and food workers.
8. Reduce the environmental damage of land, water and air from food production and the food system.
9. Protect the biodiversity of seeds, soils, ecosystems and the cultures of food producers.
10. Rejoice and share the sacred gift of food with all.

Source: http://www.widl.community/wp-content/uploads/2016/01/%C3%96RK_10Geboteder-Nahrung_DE_Langfassung.pdf.

The new opportunities and potential connected with the innovative role of the churches in the implementation of the SDG Agenda could be used far more intensively through the international ecumenical networking of partners, thus contributing to a reversal of the trend relating to nutrition and agriculture; and thereby also changing people’s attitudes towards animals, animal breeding and meat consumption.

6. Key Theological Points and Political Demands regarding Sustainable Livestock Ethics

6.1 Key Theological Points regarding Sustainable Livestock Ethics from the Churches' Perspective

1. From a Christian viewpoint, humans and animals belong together, since they are both God's creatures. Therefore, we speak of animals as our fellow creatures. Neither group have created their living environment themselves and this fact binds them together in mutual dependence upon one another. It is now time for an objectifying and mechanistic understanding of animals to be left far behind, and for new biological and philosophical insights about animal ethics to gain greater acceptance within the general public's everyday consciousness and nutritional awareness, and for this to be asserted in relation to the treatment of farm animals that are used in agriculture. The division between an ethics that is applied to pets (cuddly animal ethics) and livestock ethics needs to be overcome.
2. Even if one may only speak of an inalienable dignity and absolute right to life with regards to humankind, an animal cannot only be identified by its purpose for commercial exploitation, as a disposable object for human consumption and trade. As our fellow creatures, animals have their own beauty, dignity and meaning in life. A revision of our modern relationship with animals, that has been largely influenced by industrialisation, is unavoidable, not only within the context of livestock ethics, but also within the context of the global ecological crisis. The biblical vision of a coming kingdom of peace, which includes the animal world, culminates in the hope and promise of a reduction of violence within human-animal relationships. In the production of food, humankind is therefore subject to the commandment to substantially reduce violence used against creation and all living things, as well as to overcome injustice in relation to other people.
3. Agricultural animal husbandry is not only agribusiness (the economic perspective), but also part of an agrarian culture (the ecological perspective of sustainability); and this is to be taken literally, in the sense that it is a concept of culture (Latin "colere"), and that we are to create an economy of care, nurture and provision.

In the context of a new, agro-ecological consciousness and a growing awareness of animal welfare and animal rights, we need to treat animals in a way that is compliant with the above understanding. The churches' livestock ethics share the conviction that there is an indissoluble relationship between animal welfare, human welfare and the welfare of creation. Performance optimisation of livestock within breeding must respect the particular nature of every species, as well as ensuring that potential suffering in the breeding line is avoided (prevention of the breeding of defects). Performance optimisation at any cost cannot be a principle to which one adheres as part of an ecological and ethically responsible agriculture.

4. The scientifically recognised five freedoms are to be observed as parameters for assessing animals' well-being:
 - Freedom from hunger and thirst;
 - Freedom from discomfort caused by an unsuitable environment;
 - Freedom from pain, injury and disease;
 - Freedom from fear and distress;
 - Freedom to express normal behaviour.Veterinary checks and consultation for farms need to be intensified and carried out continuously; and agricultural personnel need to be trained in such a way that these five freedoms are sufficiently observed and that adequate compliance with these five freedoms is ensured.
5. Many people working in the agricultural sector care for their animals day after day, throughout the year, even during holidays. Surely, they deserve society's appreciation as well as fair prices for their products.
6. Respect for agricultural work with animals, which follows on from professional ethics, involves a commitment to respond with openness to the altered expectations within society, as well as to the new, scientific insights into animal ethology, veterinary medicine and agricultural ecology; and also to find ways to implement them in agricultural practices.
7. Slaughtering enterprises, the food industry, food retailers and consumers must fulfil their own responsibilities which follow on from business ethics and consumer ethics, as well as making their specific contribution to an agro-ecological transition and seeking ways in which to realise an adequate financial remuneration of livestock husbandry; one that is in line with animal welfare. The introduction of ambitious and legally binding animal welfare labels can steer buyer behaviour in the right direction and promote appreciation for the efforts made by agriculturists to ensure that husbandry conditions are in line with animal welfare.

8. There are conflicts between the goals of animal protection, ecological sustainability, economic efficiency, competitive capacity and the satisfaction of mass demand. However, these conflicts of objectives should not be resolved by giving priority to economic profitability, or rather, they should not be exclusively concluded in favour of the economic aspect, since the survival capability of future generations and the ecological integrity of the planet as a whole are at stake. It is never only a single group within the agrarian economy that carries the responsibility to make new decisions regarding the relevant objectives, but rather, making decisions always involves complex political-ethical and economic negotiation processes. The altered insights regarding the planetary boundaries of our current habits concerning production and nutrition require a clear prioritisation in favour of criteria of animal welfare and ecological sustainability, with the provision that current rates of meat consumption are halved, at the very least. We are currently producing excessive and excessively inexpensive meat through standards of animal welfare that are too low – at a global as well as at a national level.
9. Legal changes to promote animal welfare and ecological sustainability within agriculture need to be legally binding at European – and as far as possible, also at an international level, in order to avoid a dumping competition with suppliers who, through cheap imports, would counteract and undermine higher standards regarding quality and animal welfare. When legal changes are approved, those in political authority also need to examine or even implement measures which help secure the future survival of agricultural enterprises that are facing the challenge to meet higher standards relating to the condition of barns and the keeping conditions. Thereby, it will be easier to calculate the time and finances needed to realise these measures for the promotion of animal welfare.
10. We need a global turnaround in our understanding of development; one which will be compatible with a reduction in meat consumption. This requires a cultural transformation process which has the same radical nature and depth as the learning process undertaken along the path towards a decarbonisation of the world economy. At present, the SDG-Agenda does not offer a strong enough starting point for this process. However, for ecological reasons, the development of prosperity and the consumption of meat need to be separated with immediate effect. In addition, new discussion initiatives need to gain ground in the ecumenical world as well as in the ACT Alliance; ones which focus on new, ecologically and socially responsible livestock ethics and which have, up until now, been paid little attention in many non-Western cultures of the earth. In other words: the discourse on animal ethics and agro-ecology needs to be internationalised.

6.2 Key Political Demands regarding Sustainable Livestock Ethics from the Churches' Perspective

1. A Comprehensive Strategy to Improve the Situation of Livestock Husbandry in Germany

In order to improve the situation of livestock husbandry in Germany, a political-ly-sustainable, overall strategy is required. All those who share the responsibility, along the entire length of the production chain involving the use of farm animals, as well as the consumption chain of animal-based products, need to accept their responsibility.

2. Meeting Animal Protection Standards, Improving Controls and Reducing Deficiencies in Enforcement

It is imperative that the currently effective, or even, the currently recommended, animal husbandry standards (cf. the WBAE-report of 2015 on socially-acceptable forms of animal husbandry) are observed; the verification of these standards needs to be undertaken with greater accuracy and greater frequency in traditional, as well as in organic, businesses.

It is both urgent and necessary to notably improve the inspection of barns, animal transport, stunning and slaughtering facilities. In order to ensure this, sufficient personnel and equipment are needed to supply veterinary offices. Official veterinarians should also be better protected when practising their profession and be given sufficient scope for legal action. Stark deficits in animal protection within these areas should be more openly brought to the public's attention, in order to generate greater pressure for political action.

3. Ending Live Animal Transport outside Europe

As a result of decades involving huge violations of animal protection laws, the live animal transport of livestock outside Europe should be swiftly and comprehensively prohibited. In terms of animal transport within the EU, the effective laws must be implemented immediately. The maximum duration of a journey should be limited to eight hours.

4. Improving Animal Husbandry Policies at National and European Level

A review should be undertaken as to whether animal welfare laws need to be supplemented and improved as far as they concern farm animals in Germany and at EU-level. The current German regulations concerning livestock husbandry should also be reviewed and extended to include all farm animals. Issues including animal health, finding alternatives to amputations, reducing the use of antibiotics and other medication, etc., need to be investigated further. The development of alternatives to the million-fold killing of chicks also needs to be advanced.

At national and European level, some important improvements include greater coherence and adequate collaboration between those engaged in animal welfare and health policies, as well as within agricultural, environmental and nutritional policies. The use of antibiotics in animal husbandry should be more intensely monitored and reduced at national and European levels.

5. Advancing the WTO-Regulations and the EU-Trade Policy

Germany and the EU should advocate that the WTO regulations be extended to include matters pertaining to animal ethics and animal protection (moral concerns). This would mean reducing price dumping within international markets, thereby addressing the disadvantage that is felt keenly by livestock farmers facing higher animal protection standards. In relation to EU-trade policies, one might also discuss e. g. labelling requirements or import restrictions relating to animal welfare. At the level of relationships between EU member states, African nations (AU) and Asia, it is targeted lobbying and dialogue that should help each nation adopt appropriate animal welfare legislation and animal husbandry standards, including suitable mechanisms to monitor the degree to which basic standards of animal ethics have been met.

The question as to what constitutes the right amount of meat consumption has become a key question of the world health situation as well as of the ecological carrying capacity of the earth. It is only through a politically intended de-coupling of the growth of the economy and prosperity from an increase in meat consumption, that the necessary reversal of current trends in the world food situation can be achieved. The German government should bring a targeted initiative to the table during G20 negotiations, as well as into conversations with WTO, FAO and WHO; an initiative that seeks to restrict, reverse and transform the global meat industry and point it in the direction of sustainability.

6. Revising EU-Trade Policy to Include Aspects of Environmental and Development Policy

A correction and adaptation of current EU trade policy regarding meat exports and feed imports, to include aspects of environmental and development policy, is urgently required. In African or Latin American third party countries, a vast reduction in surface coverage through the use of EU-fodder imports is essential.

7. Establishing Objectives and Measures Relating to Animal Welfare in the Re-orientation of the EU's Common Agricultural Policy (CAP)

Within the current political discussions regarding the re-orientation of the CAP, between 2021 and 2027, animal welfare objectives must be taken into account to a much greater degree. In order for this to happen, there needs to be a substantial redeployment of finances from the 1st column to the 2nd column. The EU-states whose high animal welfare standards are enshrined in regulatory law, could compensate their higher level with means from the European Agricultural Fund for Rural Development (Europäischer Landwirtschaftsfonds für die Entwicklung des ländlichen Raums; ELER). The CAP-investment incentive for farm buildings should be limited to farms with a markedly enhanced level of animal welfare; one that exceeds the legal standards. Grazing, the provision of runs and species-appropriate enrichment activities, in particular, should be supported by the state. At the same time, farmers should be entitled to reasonable asset protection, as well as planning and investment security.

8. Enhancing Animal Welfare Measures within the National Joint Scheme “Verbesserung der Agrarstruktur und des Küstenschutzes” (GAK) (improving agricultural structures and coastal protection), as well as through the German Sustainability Strategy

Within the GAK, the remuneration of animal welfare practices should be extended as an essential component of a national strategy for the development of rural areas.

The continuous and extremely high nitrate concentration, brought about by the discharge of slurry from intensive farming in Germany, must be drastically reduced in order for Germany to observe the EU-Water Framework Directive of 1990, the intention of which is for all surface water to be in a good chemical and ecological condition by 2027.

In 2020, in the course of revising the German Sustainability Strategy (Deutsche Nachhaltigkeitsstrategie; DNS), relevant indicators to measure the progress made towards achieving the goals are to be phrased in a more ambitious way, in particular those that aim to reduce the nitrogen surplus and to increase the percentage share of agricultural area in Germany that is cultivated by organically managed farms. Above and beyond this, we call upon the German government to establish challenging goals and indicators, as well as binding measures, for animal welfare and meat consumption, as part of the DNS.

9. Intensifying Animal Welfare Measures at Federal State and District Levels

Within the federal states, as well as at district level, concerted action for the improvement of animal welfare should be undertaken according to a needs assessment. As part of the evaluation of the animal welfare practices, the level of remuneration should be based upon indicators which relate to the keeping conditions and, increasingly, indicators assessing the condition of the animals themselves (claw health, signs of arthritis, cell count in milk, carcass examinations with regard to lesions, etc.).

Wherever there are conflicts between goals that threaten diverse protective rights, these should be swiftly and constructively resolved. Similarly, conflicts between greater animal welfare and e.g. reduced air pollution can, at times, be alleviated through technology.

Furthermore, spatial planning instruments can be used to plan the spatial navigation of livestock facilities. In those centres where there is particularly intensive livestock husbandry and in which substantial environmental pollution occurs, the question should be asked as to whether it is possible to specify a regionally-specific, maximum limit of livestock density and herd size.

10. The State's Monitoring of Animal Welfare

A national, as well as regional, or even company-specific monitoring system for animal welfare should be established, networked and interlinked. In this, an information platform concerning aspects of animal welfare that is located in a central place and regularly updated, might prove to be helpful.

11. Promoting Research for an Animal Welfare-oriented Form of Agriculture and Breeding Using Public Funds

The public promotion of research within the agrarian and veterinary sector should be extended to include many more aspects of animal welfare. In particular, interdisciplinary and international research regarding these aspects should be strengthened. Scientific approaches relating to animal breeding, animal protection, animal health, technology used in husbandry, environmental protection, animal nutrition and the emotional well-being of animals need to be given a greater authority.

At the same time, public research about breeding should be extended to include goals such as longevity, robustness and performance of livestock animals. The preservation of all farm animal breeds should not only be continued but intensified by the state.

12. Expanding Agricultural Training Courses in Germany to Include an Orientation towards Animal Welfare

Topics such as livestock ethology, animal welfare, livestock ethics and agro-ecology, etc., should be made obligatory and firmly established within study courses such as agricultural sciences and nutritional science, as well as within veterinary medicine in Germany. This not only ensures that the study courses are fit for the future, but that the upcoming generation of agriculturists and veterinarians are adequately prepared for the challenges relating to a sustainable agriculture and animal husbandry in Germany.

An awareness and general knowledge about animal welfare and animal welfare legislation, as well as about the motivation of livestock handlers to comply with animal ethics, are to be strengthened through the general public, agricultural training and consultancy systems. Regular, obligatory training courses for professional development are important. A mandatory certificate of general knowledge about the protection of farm animals should be introduced for livestock handlers.

13. Developing Fiscal Instruments within the Area of Meat Consumption

For ecological, development and health-related reasons, the relevant ministries of the Federal Government should develop coherent measures to establish effective incentives to reduce the excessive consumption of cheap meat. Fiscal instru-

ments to reward certain types of meat production should be developed which do justice to those products that meet ecological and animal welfare standards, and which enable farmers to earn a livelihood.

14. Investigating Market-dominating Positions within the Livestock Sector and the Food Retailing Industry

Within livestock breeding, husbandry and processing, as well as meat marketing and also within the egg and milk sector, there are increasing tendencies for a vertical and horizontal market concentration; and the same trend can be seen throughout the entire food retailing industry. The potent market power of the customer intensifies the fall in prices of animal-based products, so that many agriculturists are offered prices which, in the long term, will not even cover their costs. Under such conditions, economic scope for greater animal welfare is barely possible. Therefore, suitable measures are needed to strengthen the value-added chains in which the livestock farmers operate, including decentralised processing facilities such as abattoirs and dairy factories. In addition, the increasing market concentration within the agricultural intermediate goods sector, as well as in the food retailing industry, should be effectively counteracted through the application of cartel law.

15. Creating an Animal Welfare-related Quality Mark for Meat and other Animal-based Products

The Federal Government is called upon to be swift in creating an ambitious, legally binding quality mark for meat and other animal-based products; one which is transparent for the consumer.

16. Changing Public Canteens, Educational and Consumer Policy

Aspects of animal welfare should be attributed greater significance within the area of public food procurement, as well as in the canteens of state authorities. Nutritionally high-quality meals containing little or no meat should regularly be on offer. This should also apply to church institutions.

In educational ministry, information campaigns about food waste, in particular wasting animal-based products, as well as instruction promoting a form of meat consumption that is compatible with our health, need to be intensified. In

nurseries and schools, the focus should be on topics including animals as fellow creatures, animal welfare, meat consumption and other, global ecological consequences. The extent to which the curriculum needs to be changed to accommodate the inclusion of these topics needs to be investigated.

6.3 Conclusion

Through these challenges, the Protestant Church, as an admonisher, mediator and driver, together with many partners from civil society, would like to contribute to the cultural transformation process towards sustainable livestock ethics and moderate meat consumption. Respect for animal welfare, a nutritional transition and agro-ecological sustainability belong together and can only be realised in conjunction with one another.

Processes of change in these areas require sufficient time and reliable transition periods that can be planned, in order to achieve the necessary structural changes in agricultural animal husbandry in ways which are economically feasible and socially acceptable. Amongst the general public, there is a willingness to back such a transition towards greater animal welfare, a greater quality of nutrition and ecological sustainability, that is often underestimated.

The principle reasons for the Protestant Church's commitment to sustainable livestock ethics are: a respect for the dignity of animals as our fellow creatures and an ethics of sufficiency, both of which are deeply rooted within the Christian tradition. These reasons highlight the underlying intention: For all creatures to be able to live with the dignity that is intended for them, and praise their creator in their own very unique way, as understood by the words from Psalm 150: "Let everything that has breath, praise the Lord".

Appendix

List of Abbreviations

ACT Alliance	Action by Churches Together, international network of churches engaged in humanitarian, development and advocacy work
AGU	Arbeitsgemeinschaft der Umweltbeauftragten in der EKD (Working Group of the Environmental Officers of the EKD Member Churches)
AKUT	Aktion Kirche und Tiere e. V. (Action for Church and Animals)
AMR	Antimicrobial resistance
AU	African Union
BLE	Bundesanstalt für Landwirtschaft und Ernährung (Federal Office for Agriculture and Food)
BMEL	Bundesministerium für Ernährung und Landwirtschaft (Federal Ministry of Food, Agriculture and Consumer Protection)
BNE	Bildung für nachhaltige Entwicklung (Education for Sustainable Development)
BRICS-States	B razil, R ussia, I ndia, C hina and S outh Africa
CAP	Common Agricultural Policy of the EU
CO₂	Carbon dioxide
CSR	Corporate Social Responsibility
DAFA	Deutsche Agrarforschungsallianz (German Agricultural Research Alliance)
DNA	Desoxyribonucleic acid, contains an organism's genetic blueprint
DNS	Deutsche Nachhaltigkeitsstrategie (German Sustainable Development Strategy)
DART	Deutsche Antibiotika-Resistenzstrategie (German Strategy Against Antimicrobial Resistance)
DEKT	Deutscher Evangelischer Kirchentag (German Protestant Church Convention)
DGE	Deutsche Gesellschaft für Ernährung e. V. (German Nutrition Society)
DLG	Deutsche Landwirtschafts-Gesellschaft e. V. (German Agricultural Society)
ECJ	European Court of Justice
EDL	Evangelischer Dienst auf dem Land (Rural Ministry of the EKD)
EFSA	European Food Safety Authority (Europäische Behörde für Lebensmittelsicherheit)
EKBO	Evangelische Kirche Berlin-Brandenburg-schlesische Oberlausitz (Protestant Church Berlin-Brandenburg-Silesian Upper Lusatia)

EKD	Evangelische Kirche in Deutschland (Protestant Church in Germany)
EKM	Evangelische Kirche in Mitteldeutschland (Protestant Church in Central Germany)
ELER	Europäischer Landwirtschaftsfonds für die Entwicklung des ländlichen Raums (European Agricultural Fund for Rural Development)
EU	European Union
FAO	Food and Agriculture Organization
FAWC	Farm Animal Welfare Council
G20	Group of the 20 most important industrial and emerging nations
GAK	Gemeinschaftsaufgabe zur Verbesserung der Agrarstruktur und des Küstenschutzes (National Joint Scheme to Improve Agricultural Structures and Coastal Protection)
GDP	Gross Domestic Product
GGKE	Gemeinsame Konferenz für Kirche und Entwicklung (Joint Conference Church and Development)
GRAIN	Genetic Resources Action International; international NGO
IATP	Institute for Agriculture and Trade Policy
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
ITTN	Institut für Tierhygiene, Tierschutz und Nutztierethologie der Stiftung Tierärztliche Hochschule Hannover (Institute for Animal Hygiene, Animal Welfare and Farm Animal Behaviour of the University of Veterinary Medicine, Hanover)
JBS	José Batista Sobrinho Sociedade Anônima; Brazilian meat producer
KIM	Kombinat Industrielle Mast (Combine for Industrial Fattening)
KTBL	Kuratorium für Technik und Bauwesen in der Landwirtschaft e.V. (Association for Technology and Structures in Agriculture)
LSU/ha	Livestock Standard Units per hectare
LWF	Lutheran World Federation
NEC-Richtlinie	National Emission Ceilings Directive (Richtlinie über nationale Emissionshöchstmengen für bestimmte Luftschadstoffe)
NGO	Non-governmental organisation
OIE	World Organization for Animal Health
RKI	Robert-Koch-Institute
SDG	Sustainable Development Goals
SDG-Agenda	Sustainable Development Agenda (Agenda 2030)
SRU	Sachverständigenrat für Umweltfragen (Advisory Council on the Environment)

TierSchTrV	Tierschutztransportverordnung (Animal Protection Transport Ordinance)
UBA	Umweltbundesamt (German Environment Agency)
UN	United Nations
WBAE	Wissenschaftlicher Beirat für Agrarpolitik, Ernährung und gesundheitlichen Verbraucherschutz (Advisory Council on Agricultural Policy, Food and Consumer Protection)
WBGU	Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (Scientific Advisory Board of the German Government on Global Environmental Issues)
WCC	World Council of Churches
WCRC	World Council of Reformed Churches
WHO	World Health Organisation
WLF	Westfälisch-Lippischer Landwirtschaftsverband (Westphalia-Lippe Agricultural Association)
WTO	World Trade Organisation
WWF	World Wide Fund For Nature

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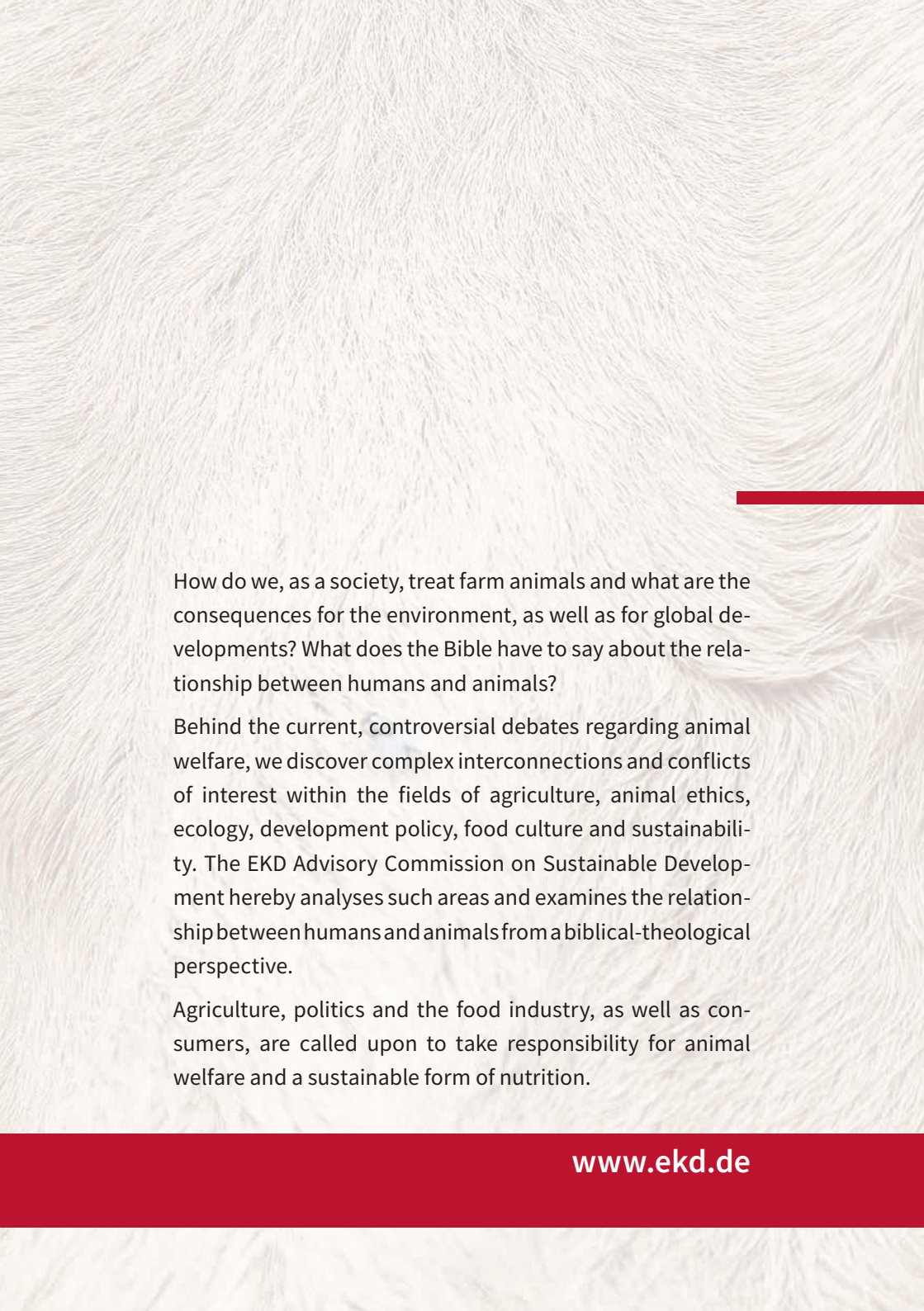
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How do we, as a society, treat farm animals and what are the consequences for the environment, as well as for global developments? What does the Bible have to say about the relationship between humans and animals?

Behind the current, controversial debates regarding animal welfare, we discover complex interconnections and conflicts of interest within the fields of agriculture, animal ethics, ecology, development policy, food culture and sustainability. The EKD Advisory Commission on Sustainable Development hereby analyses such areas and examines the relationship between humans and animals from a biblical-theological perspective.

Agriculture, politics and the food industry, as well as consumers, are called upon to take responsibility for animal welfare and a sustainable form of nutrition.